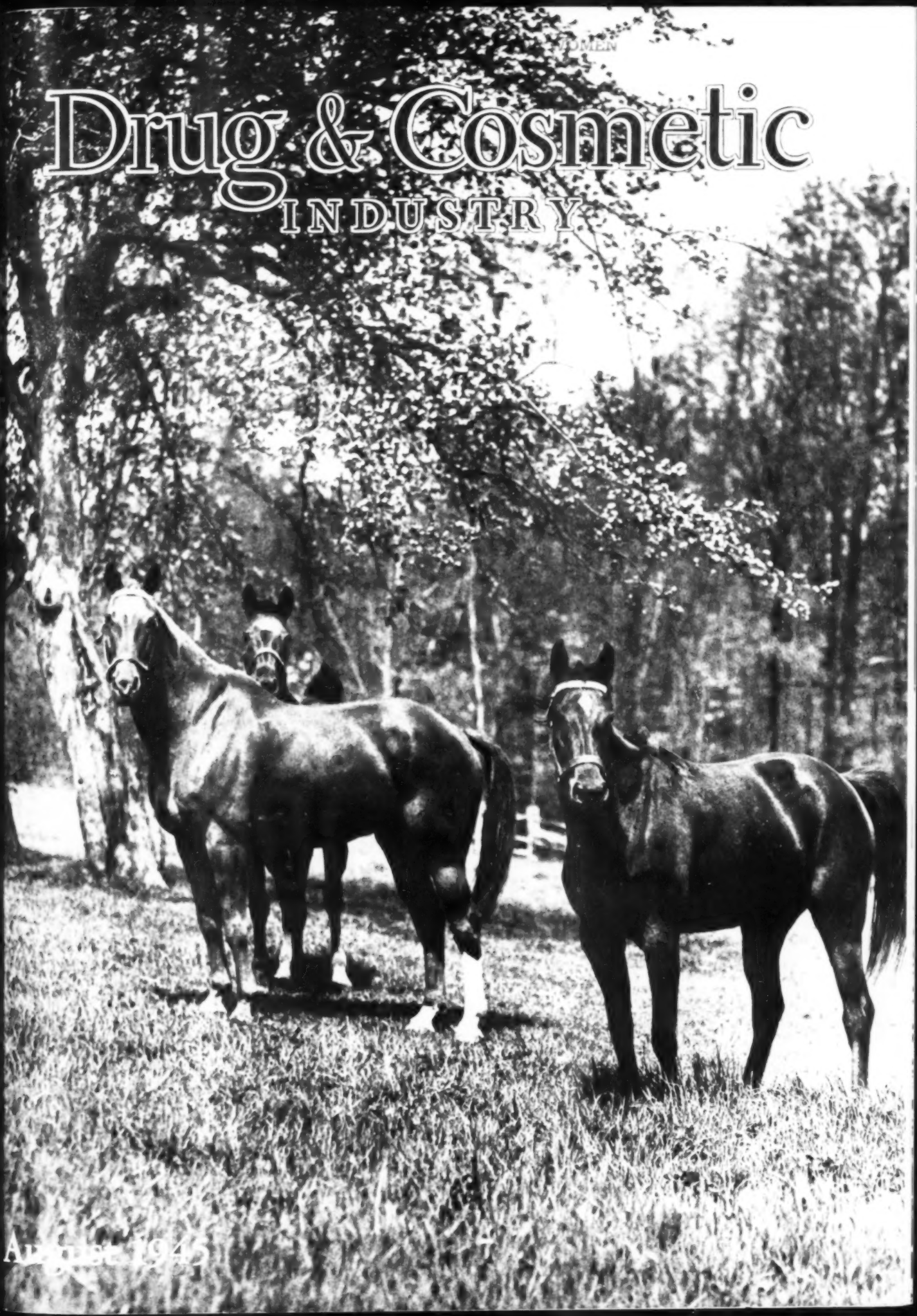
Drug & Cosmetic INDUSTRY



What's in a good face powder BESIDES GLAMOUR?

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Drug & Cosmetic INDUSTRY

AUGUST 1945

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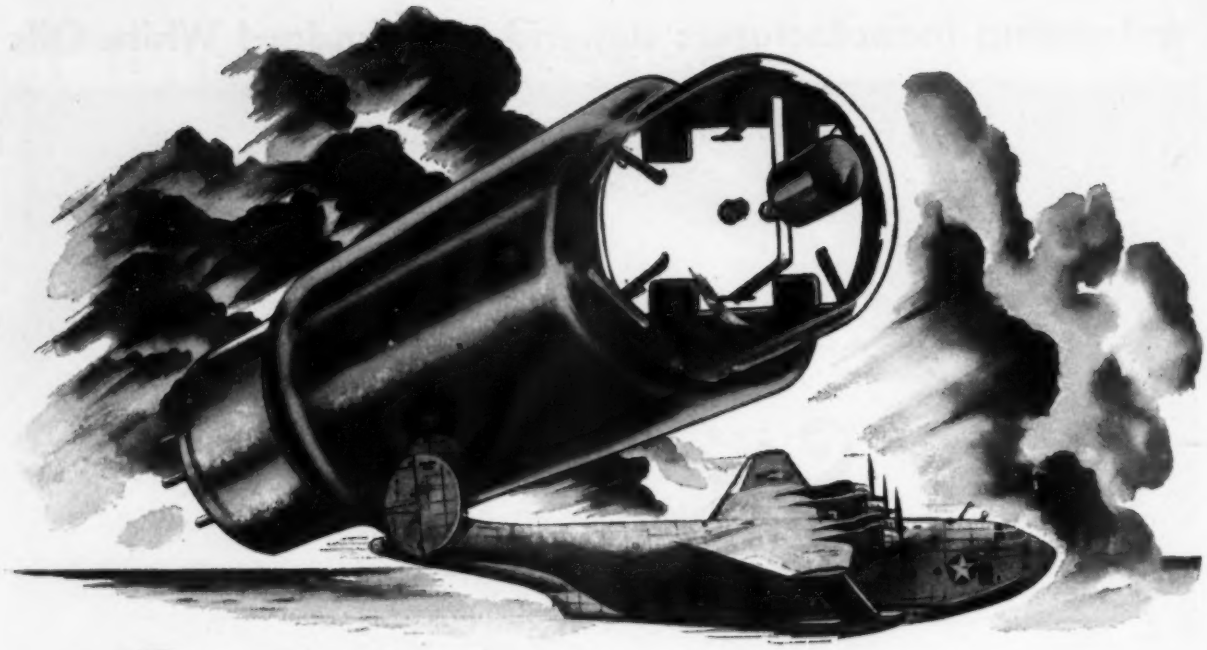
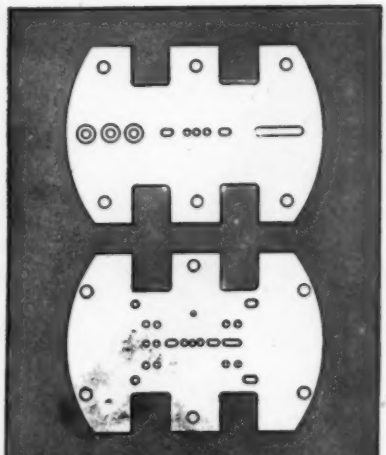


ADMIRALS CAN WAIT...

when there's TALC

to go through



Illustrated are typical talc insulators, used in electronic tubes, cut from India block talc and then fired. The same India talc is a peacetime ingredient in finer cosmetics.

High enough to unseat an admiral was the priority given 23,000 pounds of talc, rushed by air from India in four days to avert a threatened halt in electronic tube manufacture.

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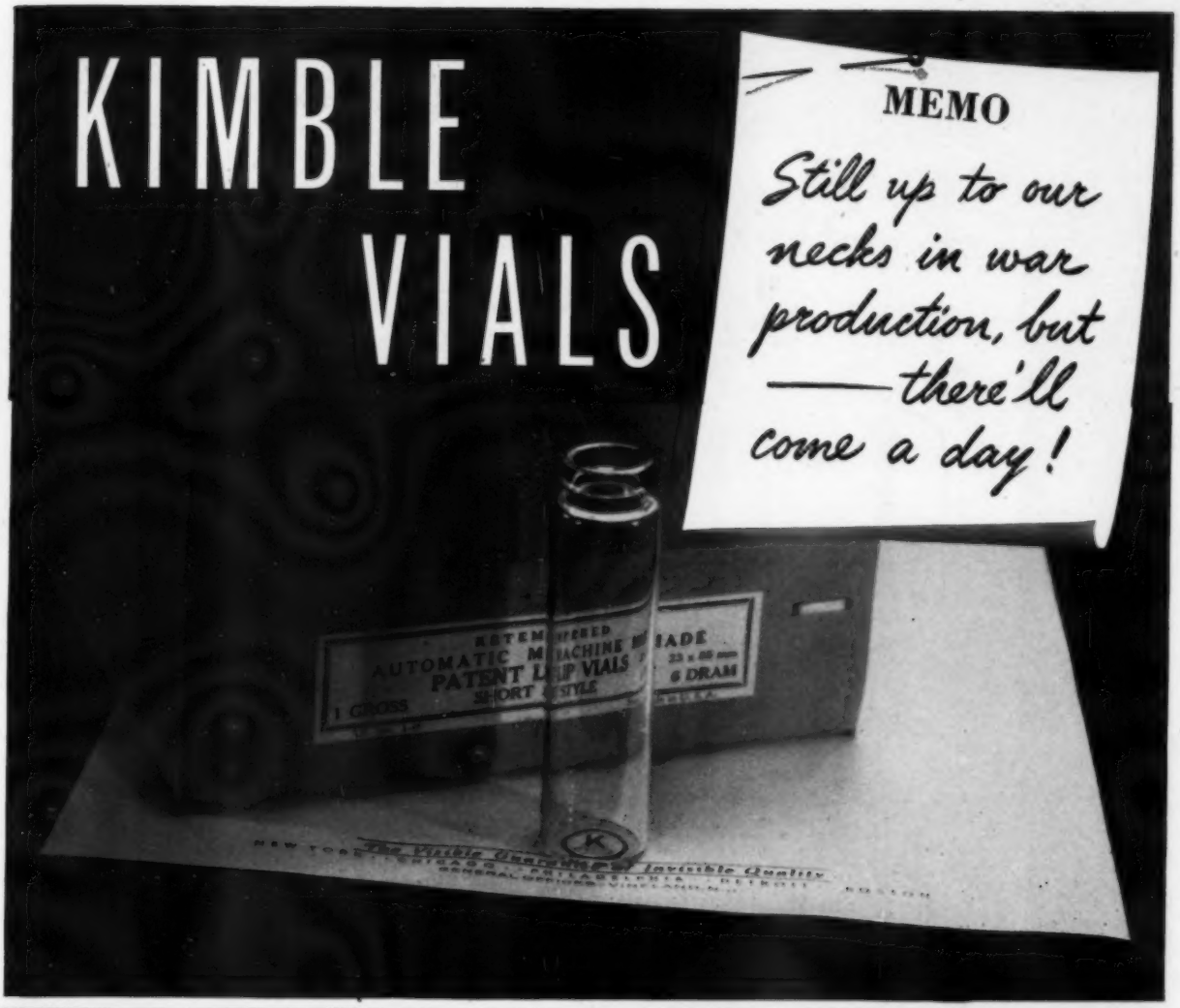

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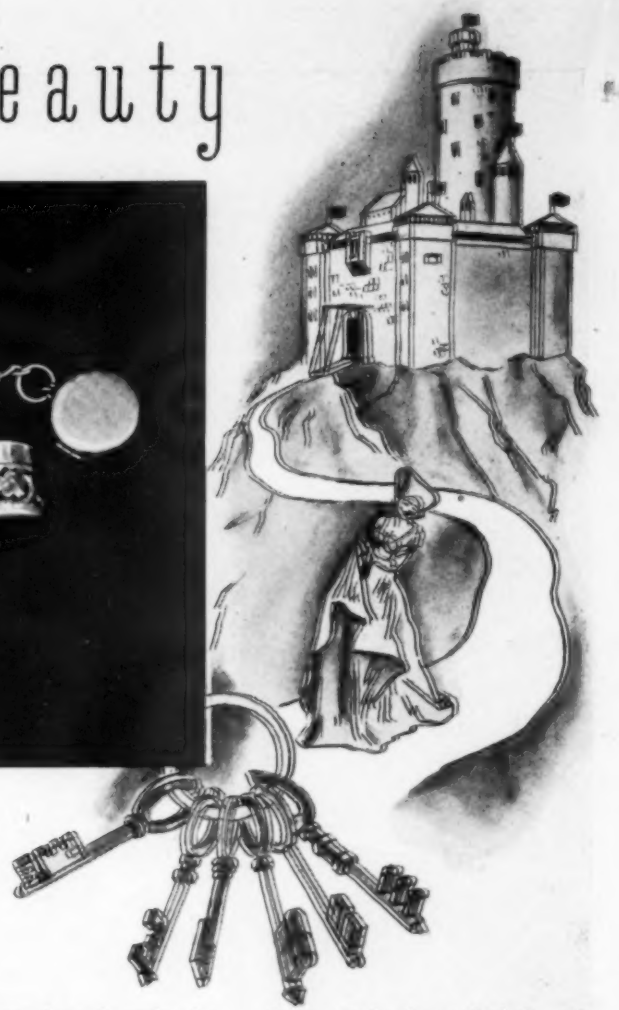
Keys to Beauty

A charming example of the Victorian chatelaine of the 19th century is this little finger ring of sterling silver with its attached accessories. Among them note the receptacle for the smelling salts of the period, and the powder box.



THE chatelaine dates from Roman days when the misiress of the castle wore the keys of her household suspended from her girdle. Medieval ladies substituted toilet articles for the keys, and continued the fashion of chatelaines. At various times, down to the Victorian era, the chatelaine has been worn, and today fashion again revives the decorative chatelaine in the charm bracelet, the lapel ornament, and, more appropriately, as decoration for the belt.

Woman's instinct to have the accoutrements of beauty always at hand is ages old. The modern woman's purse, heavy with compact and lipstick, is evidence that, though fashions change, the beauty instinct is as strong in women as ever.

Some of the basic formulas of cosmetics are of ancient origin. Many that are entirely new are being developed as a result of the wartime discoveries in many fields of research. We, at Allied, are constantly on the alert for pertinent material to advance the development of cosmetics of the future as we have done in the past.

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INSIDE NEWS

AUGUST PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1945

Scarce Rotenone Insecticide now "Stretched" with Synthetic Lethane

Rotenone, the insecticide material which in recent years has enjoyed widespread use by truck gardeners in the control of crop destroying insects, has become a war-critical item. But a synthetic material which was developed before Pearl Harbor is now finding wider popular use in "stretching" the limited supply of rotenone to meet vegetable growers' requirements. Lethane 60, as this synthetic insect-killer is known, is helping to avert the widespread destruction of essential vegetable crops in this country, which was threatened when the shortage of natural insecticides became acute.

The now-scarce rotenone insecticide has long been used by South American natives as a fish poison. Rotenone has a paralytic effect on fish, making them float to the surface for easy catching. During the past ten years rotenone has been popularly used in the United States to replace arsenicals for certain insects. Unlike arsenicals, rotenone is non-poisonous to man and is entirely harmless to crop foliage, though deadly to a wide variety of insects.

Before the war, rotenone-bearing roots were imported from Malaya and the Dutch East Indies, but when Jap battle fleets cut off supplies from the Far East, South America's limited production became the sole source of supply. Despite record plantings in Peru and Brazil during the past few years, only limited quantities of the root have been shipped to this country, for two or three years are required between plantings and harvest.

Efforts were made to find domestic sources for rotenone when the shortage was becoming imminent. The derris, cube and timbo roots, from which rotenone is extracted, are products of the tropics and have not been successfully grown in this country. It was discovered recently, however, that some rotenone could be extracted from an inconspicuous shrub called the "Devil's shoestring" or "goat's rue" which grow wild in this country. However, only very small quantities are obtained and commercial production is still a long way off. Also, unlike the imported rotenone, certain species of weevils thrive on the extract of this domestic rotenone-bearing plant—a diet that would be fatal if the imported product were used.

The shortage of rotenone insecticides has had a very serious effect on this country's vegetable crops. 1943 losses from crop-destroying insects amounted to $37,500,000 worth of vegetables. Last year, however, Lethane 60 replaced an estimated 2,000,000 pounds of war-scarce rotenone and the damage from insects was greatly reduced. This year, leading vegetable growers will rely even more heavily on this rotenone "stretcher."

Lethane 60 not only reduces the amount of rotenone required to maintain good insect control, but it has also been found that the efficiency of the insecticide is actually improved when the synthetic is added. The combination insecticide is more stable and, if properly packaged, is not subject to deterioration on carryover storage. Thus, the synthetic, the product of a Philadelphia company, cuts the requirements for the precious supplies of valuable rotenone by 40% to 50%.

Although the War Production Board has made every effort to secure adequate supplies of rotenone and even has restricted its use to essential requirements, there will still not be enough to protect crops from insect ravages. However, by "stretching" supplies with the Lethane concentrate, growers will be able to make the available rotenone tonnage fill their needs.

The new synthetic has undergone several years of testing by large growers and Agricultural Experiment Stations throughout the country, and it has proved its value and safety as an insecticide. With the War Food Administration demanding 428,000,000 acres in crops this year—an increase of 12% over 1943—growers are finding Lethane 60 a valuable ally.

Insecticides and insecticide concentrates deserve the greatest possible packaging protection against diminishing effectiveness. That's why it is safe to predict that tin containers after the war will give the best kind of assurance in keeping insecticides in the best condition to kill pests effectively. 1043

Weed Killer

A new plant hormone weed killer acts on a selective basis, killing many weeds without hurting cereal crops. Experiments for two years preceding announcement show methopone as the hormone successful in field experiments. 1044

Selective Spraying Kills Weeds

Certain off-flavors in canning products have been attributed to weed seeds. In the case of canned peas it is the immature fruits of nightshade. Selective spraying has been advanced as a method to control this nuisance. Based on preliminary data weeds are killed in the field, allowing the peas to continue growth. 1045

Flaxseed for the Fleet

It takes 1,654 bushels of flaxseed, made with linseed oil, to paint one battleship. 1046

Tartaric Acid Available from Grape Wastes

With United States annually consuming about 15 million pounds of tartaric acid, there are possibilities for grape processors using their wastes to make this product. Tartrates previously came from the southern European area, but the war has shut off that source. Preliminary results of the experiments that are in progress show that in the case of the grape pomace the recovery problem is one of extraction and concentration, and in the case of still slop from the wine and brandy processors it is only concentration. The processes take advantage of the newly available synthetic ion-exchange materials. 1047

New Uses for Cranberry By-Products

Cranberry by-products may provide many industrial uses, among them a new source of cosmetic materials. A cream has recently been made by using ursolic acid, and emulsifier, cranberry wax, a high melting complex substance, and cranberry seed oil. 1048

Borax to Safeguard and Increase Crop Yields

The needs of a starving Europe after liberation will be on a scale to call for an intensive and rational fertilizer program. According to prominent European authorities it is now generally recognized over there that borax or boric acid will have to be included in the fertilizers used abroad in order to safeguard some of the crops and obtain maximum yields. 1049

Tick and Lice Control

Rotenone dips are said to be the most effective measure for the control of sheep ticks and lice. A mixture of one pound of 5% rotenone powder and ten pounds of wettable sulfur in one hundred gallons of dip will eradicate the sheep tick at one dipping. In the absence of rotenone a suitable substitute has been found to be phenothioxin. A mixture containing 7% of phenothioxin, 7% of bentonite, 6% of a wetting agent and 80% of sulfur has been used successfully. It is used at the rate of eight pounds in one hundred gallons of dip. It is equally as effective as the rotenone dip, although higher in cost. 1050

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Shades of the Apple Tree

A review of research projects carried out in the food technology department of one New England college includes the development, on a laboratory scale, of canned oven-baked apples in sugar syrup. But the most interesting development, from a flavor standpoint, seems to be cider marmalade. Apple juice concentrated to 30 percent solids has sugar added to bring the solids up to 50 percent. Thin slices of apple are suspended in the jelly before it is poured.

Baldwin sweet cider concentrated to one-third its original volume can be added to heat-extracted apple juice to make jelly that is claimed to have a flavor superior to that from either the apple juice or the cider alone. 1051

Synthetic Skin Detergent

A synthetic skin detergent known as "pHisoderm" and produced in the form of thick fluid cream is reported hypo-allergenic, and is said to contain no soap, fatty acids, alkali, perfume or coloring matter. The new detergent has a pH value of 5.5 – average for normal skin. 1052

Vitamin Variant Preserves Juices

To prevent the oxidizing of the delicate color and flavor of processed fruit juices, the use of a vitamin variant has been advanced from research data. Vitamin C (ascorbic acid) is becoming a powerful selling feature, but may be readily lost during processing. But, by adding d-isoascorbic acid, the natural vitamin C (l-ascorbic acid) is protected during canning and subsequent storage. 1053

PLASMA IN CANS SAVES HUMAN LIFE

Returning servicemen, without exception, are praising blood plasma administered to the wounded on the battlefields and at field aid stations. Countless thousands of lives have thus been saved.

To keep plasma at its life-preserving best, it is often packed in tin cylinders for super protection. For the tin can preserves contents as no other container does. It isn't affected by heat, cold, extremes in climatic conditions. It doesn't break, chip or tear in spite of rough war-handling. And it is convenient to handle.

And while we are on the subject of tin containers, before you discard any cans, think about this: Help the boys clean up what's left of the axis by keeping tin cans clean and *turning 'em in!*

Technical Topics

OIL INGREDIENT—Tolyl Tetrasulfide is a useful ingredient of mineral lubricating oil compositions, used as cutting oils, according to a recent patent issued to a leading oil company. 1054

INSECT REPELLENT—The growing use of dimethyl phthalate as an insect repellent is estimated to absorb 25 per cent of the current United States output of phthalic anhydride. 1055

PHOSPHATE FATTENS CATTLE—Cattle fed phosphate by spreading on grass, in grain or drinking water weigh more at market time and produce more calves, according to five-year experiments in Texas. 1056

WASTE DISPOSAL—Lagoon handling of cannery waste provides possibility of complete treatment at low cost, but it requires a fairly large area for treatment.

Sodium nitrate for odor suppression may cost 0.3 cent per case for the reagent and 0.2 to 0.3 cent for all other charges when a strong waste such as that from peas is to be treated. The chemical cost may drop as low as 0.03 cent for waste from green or wax beans.

The advantages are great where the method is applicable. Disposal in untreated lagoons will cost 0.2 to 0.3 cent per case, and complaints from odor will occur even at a considerable distance from the disposal lagoon. Surface treatment with oil and treatments with lime, sodium hydroxide and creosote compounds have been unsuccessful. 1057

LINSEED OIL SUBSTITUTE—Petroleum extracts have been found successful substitutes to replace one-third of the linseed oil used in making cores for the casting of iron. No reduction of dry strength results. Larger proportions can be used with modified sand mixtures and less green binder. The extract and the oil should be premixed before mixing. 1058

ALKYD COATINGS—To avoid the yellowing and embrittlement of alkyd coatings as an effect of metallic driers, advantage is taken of the fact that alkyd resins dry by a process of molecular cross-linking. Organic cross-linking agents are incorporated in the finish. 1059

POLYMERIZED VINYL RESINS—Polymerized vinyl resins have been used satisfactorily as caulking materials in the construction of tunnels. They are applied in thin sheets to inner surfaces of the walls as these are completed. Impermeability to water is claimed for these coatings and they are said to be completely resistant to rot. 1060

NEW SOIL POISON—A patent has been issued on a new soil posion of value in killing termites, eel worms and other subterranean pests which infest wooden buildings. 1061

PHENOTHIAZINE-SALT CONTROLS PARASITISM—Aid in controlling parasitism in cattle has been secured by giving phenothiazine-salt. Steers on pastures getting phenothiazine-salt were also found to outgain steers getting only ordinary salt. 1062

SILICA—A stable solution of silica is now being offered in Britain, which is said to overcome the disadvantages heretofore met in attempts to employ silicic esters in their full potentiality. 1063

POLISHES ALUMINUM—A method for the anodic polishing of aluminum has recently been announced. 1064

INCREASING VITAMIN A IN TOMATOES—Tomatoes with ten times as much vitamin A value as is contained in varieties now offered on the market may be developed by improved breeding. 1065

SCRATCH-PROOF COATING—A scratch-proof coating, easily peeled when dried, is now being used for noses of planes. It is likely to be used for post-war planes and cars. 1066

POSSIBLE VITAMIN D_2 SOURCE—It is reported that Penicillin notatum, the same mold that yields penicillin, can be made a good source of rickets-preventing vitamin D_2. 1067

PROTECTS RUBBER—An improved anti-oxidant is reported to inhibit the deterioration of rubber caused by light, heat and oxygen. 1068

Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquiries to the original source of the article. Write to National Can Corporation, 110 East 42nd Street, New York City. Please mention the number at end of article—also name of the magazine you saw it in.

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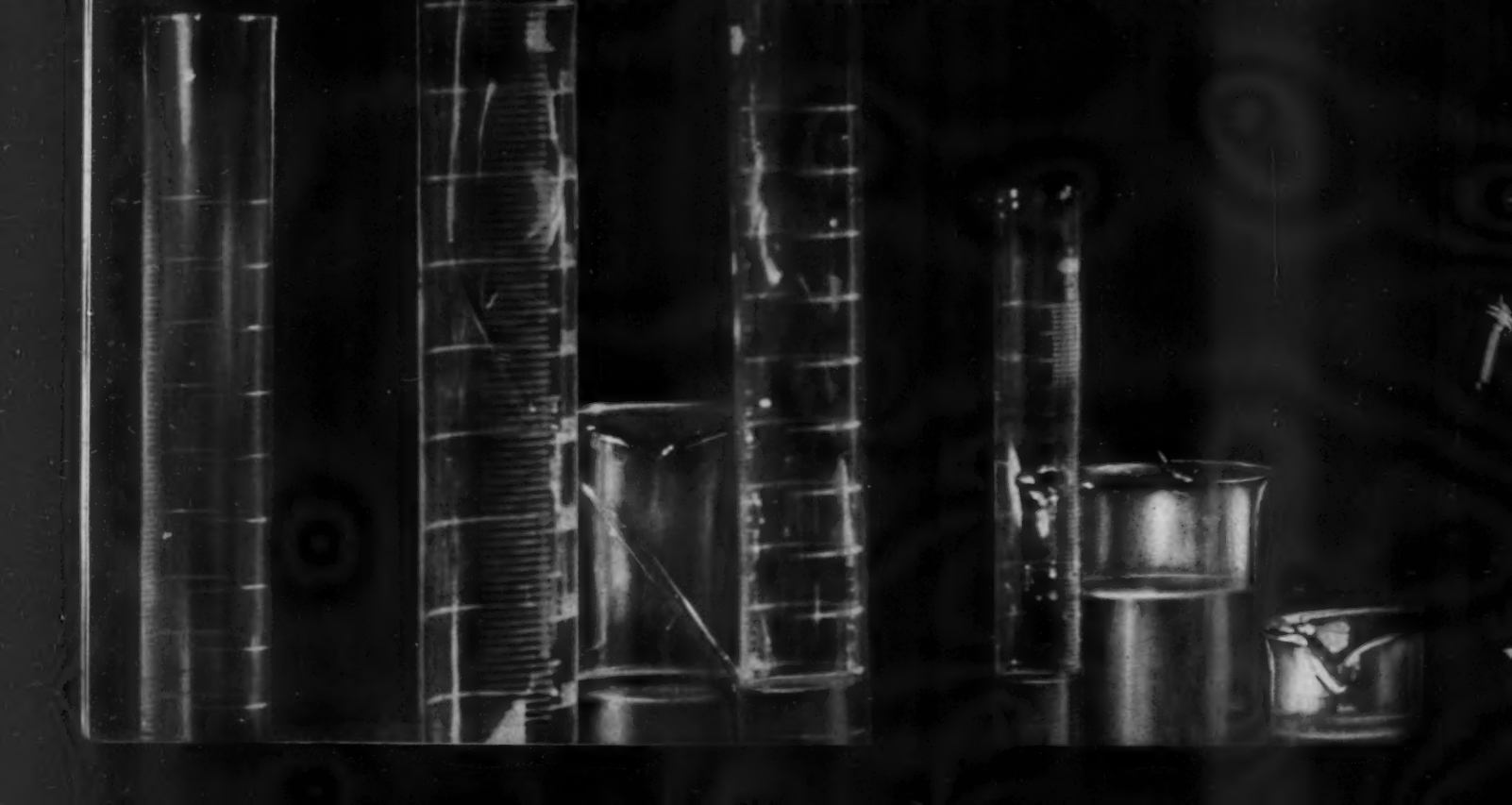

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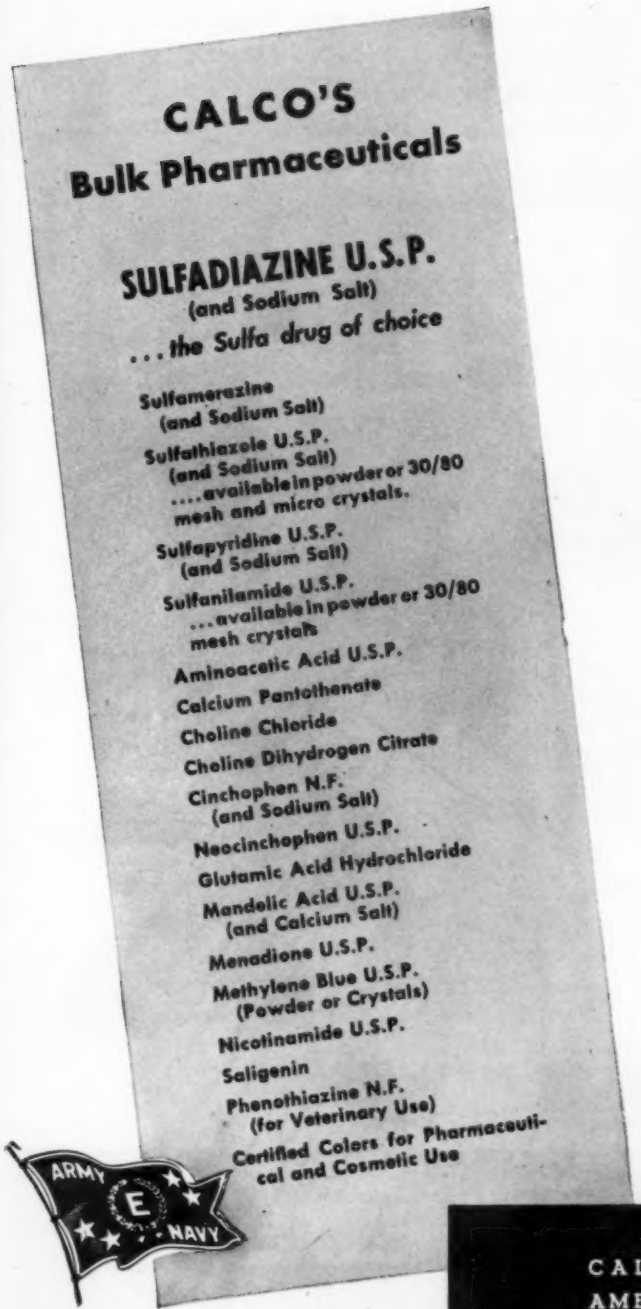

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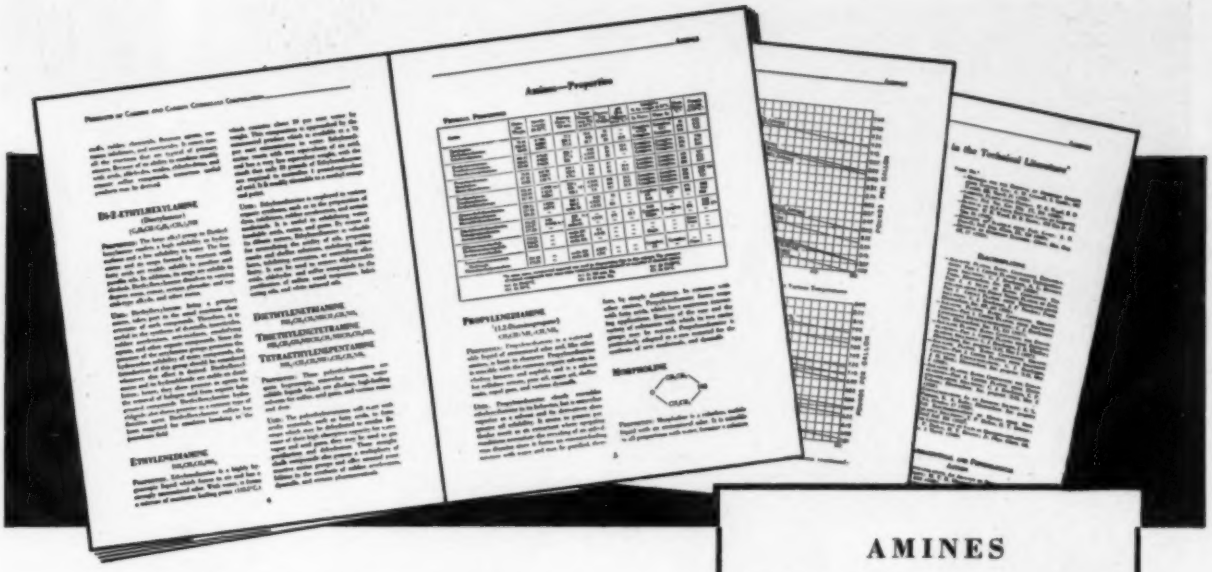

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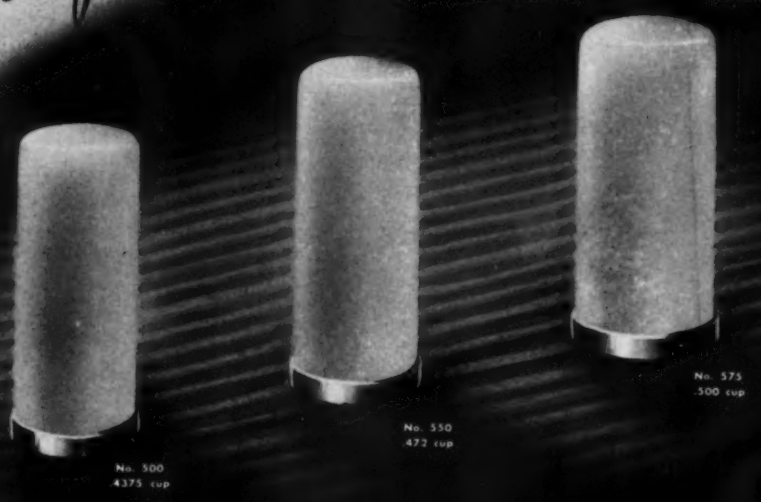

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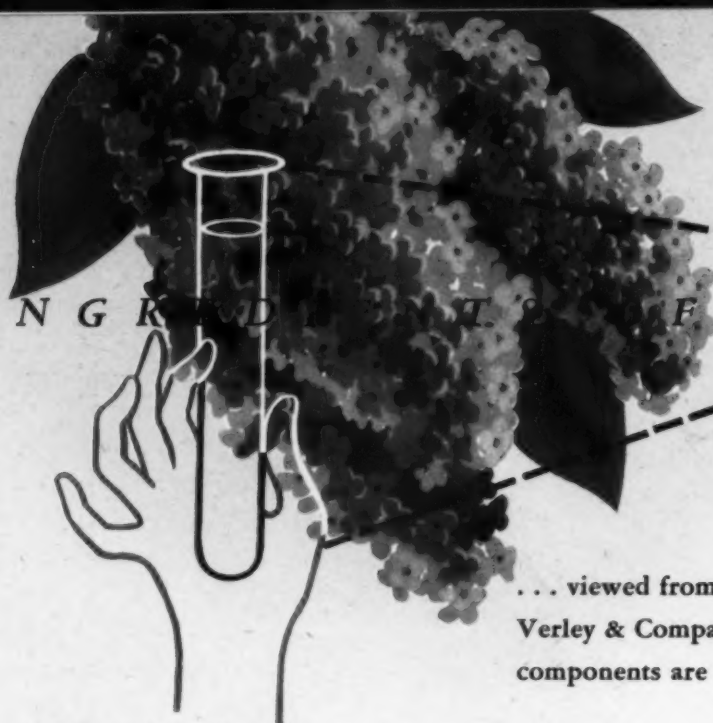

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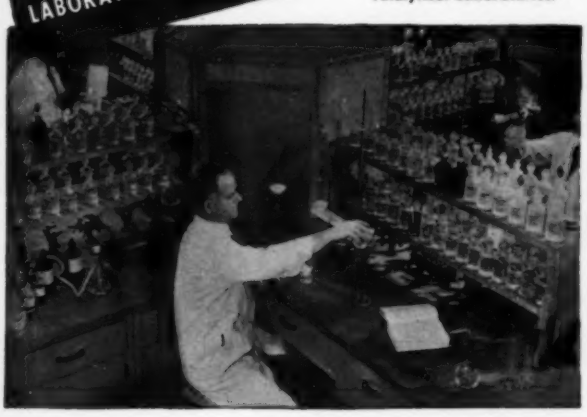

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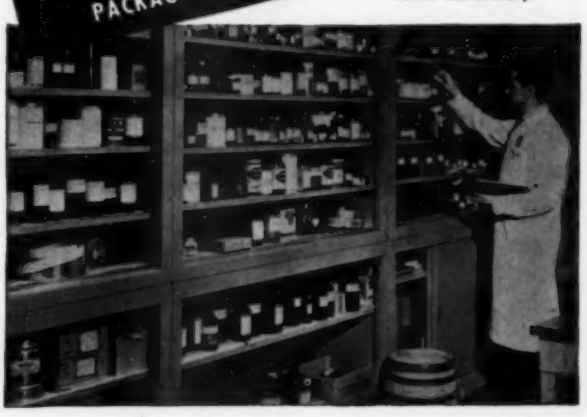

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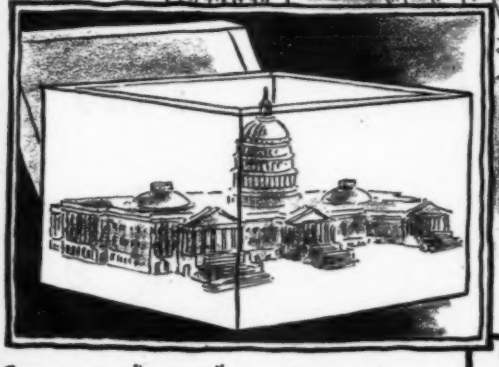

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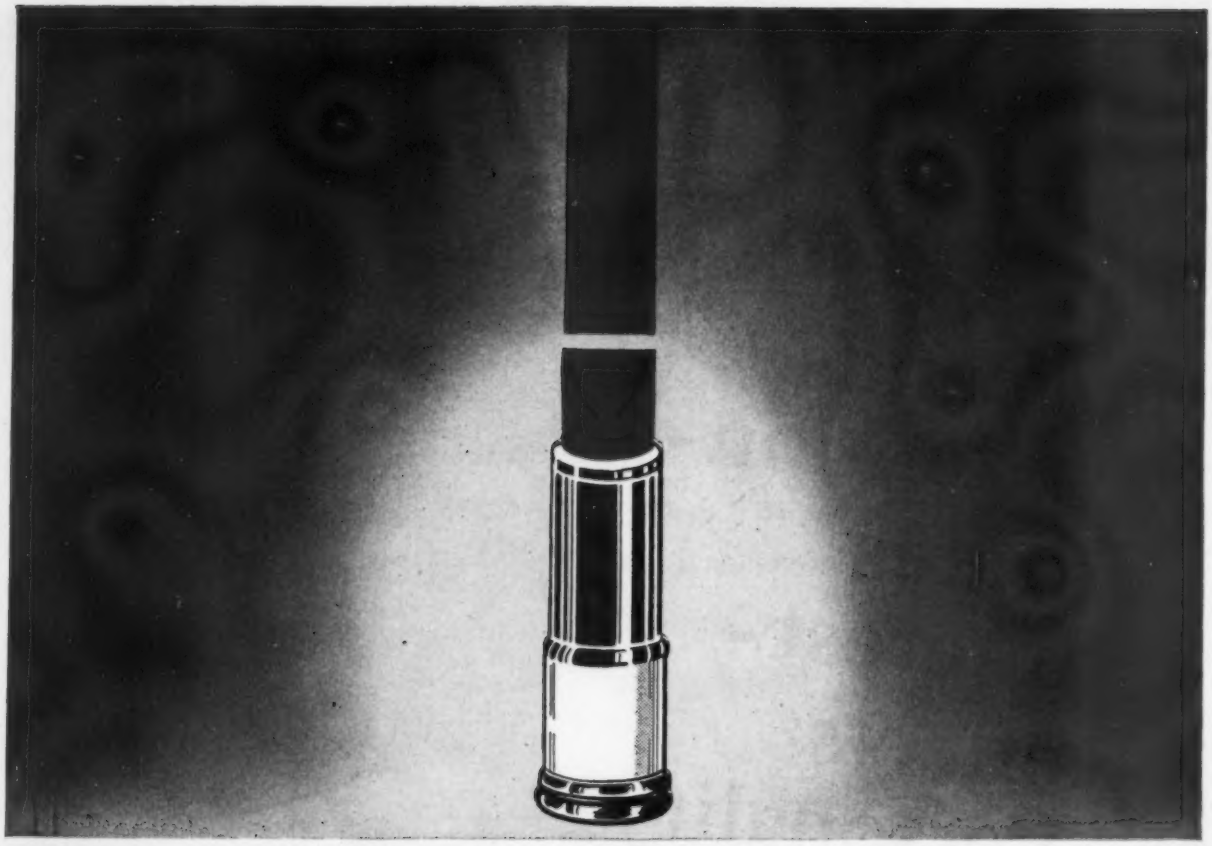

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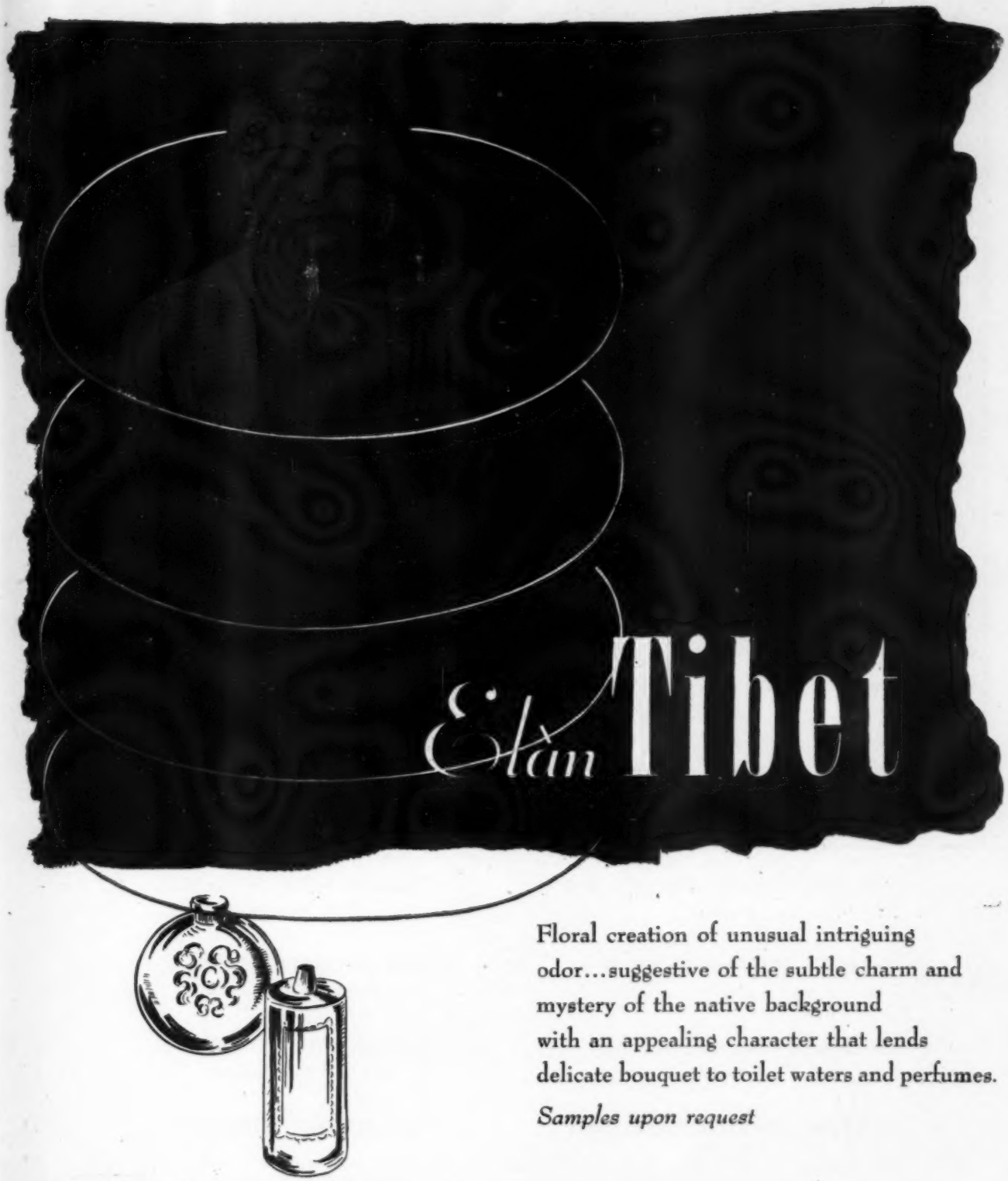

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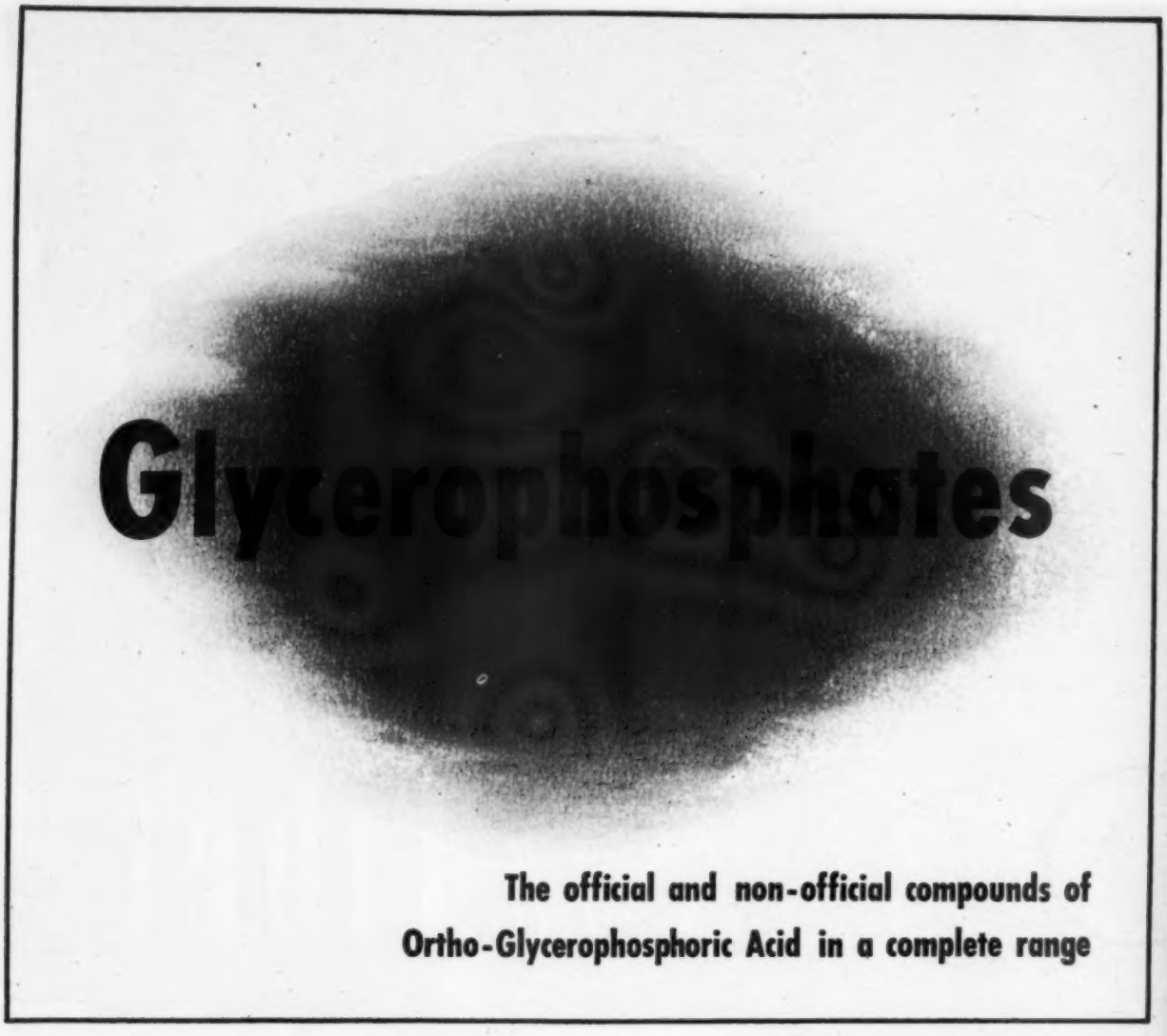

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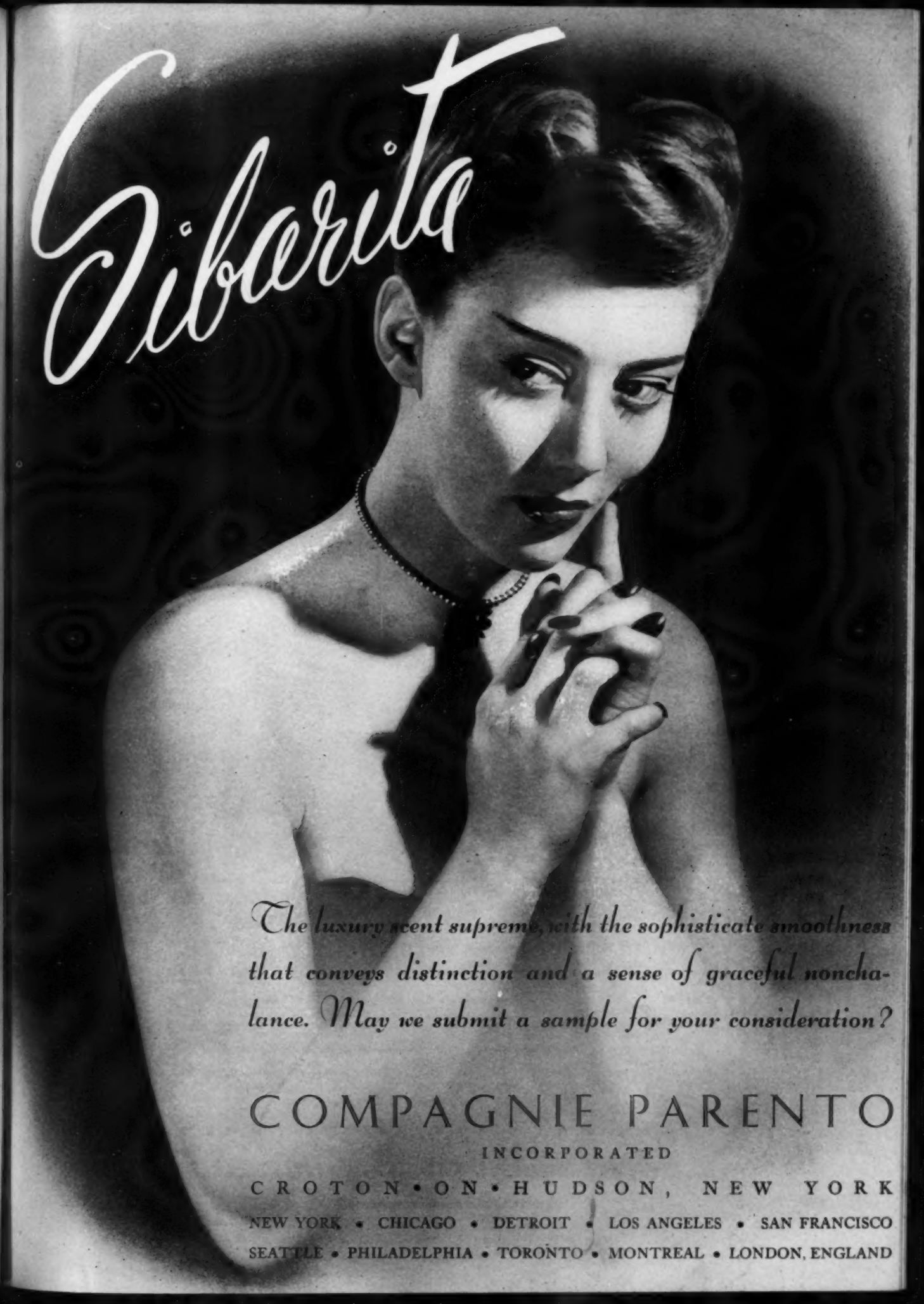
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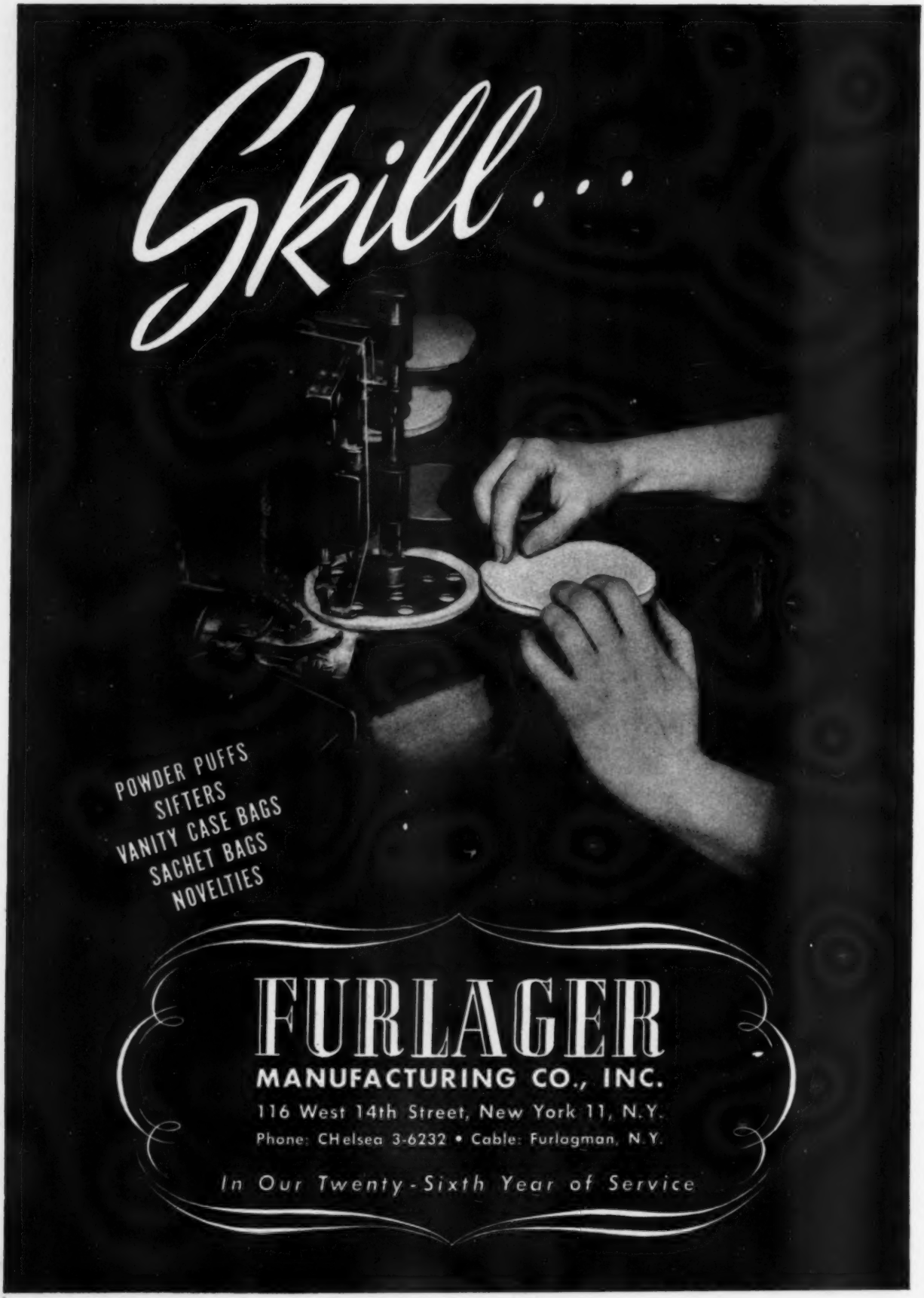
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NEW YORK 22, N.Y.

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secondary use

sales appeal

protection

Sales curves zoom upward when merchandise is packaged in handsome containers designed for secondary use. Such containers can be utilized for many household purposes long after the original contents are gone. Smart merchandisers appreciate this extra reason behind the buying interest. Sales executives know that a shopper, seeking an exquisite bottle of perfume or fine toilet soap or any of a hundred products, chooses the one packaged in a beautiful container constructed to serve later as a handsome cigarette humidor or jewel container or powder box. Made of Ethocel Sheeting or Styron—outstanding Dow plastics—such boxes possess two additional virtues fundamental to good packaging . . . they protect the contents because they are strong, durable materials . . . they step up sales appeal because their clear transparency makes each package an individual showcase.

get all 3 with Dow plastics

STYRON **PRESENT AND POTENTIAL USES:** Cosmetic and pharmaceutical boxes and containers of all types: funnels, bottles, closures, food handling equipment. Also used for jewelry, advertising items, refrigerator parts, pens, pencils, chemical apparatus, lenses, decorative objects, trim and other products.

PROPERTIES: Beautiful, clear, translucent or opaque; resistant to acids and alkalies; stable at low temperatures; broad color range; low specific gravity providing more moldings per pound; low water absorption, good dimensional stability.

Ethocel Sheeting **PRESENT AND POTENTIAL USES:** Containers of all types, sizes, and shapes for jewelry, cosmetics, and other products. Also used for displays, advertising novelties, greeting cards, envelopes, labels, decalcomanias, records, ice cube trays, lighting fixture covers, lamp shades, and similar products.

PROPERTIES: Combines toughness with flexibility: tensile strength 10,000 lbs. per sq. in.; elongation, 30%; bursting strength (Mullen), 48; folding endurance (lkg; M.I.T.), 4000. Retains these characteristics and transparency over long periods despite handling. Resistant to alkalies and grease. Withstands heat to 220° F. continuous; to 275° F. intermittent. Resists cold. Easily fabricated by drawing, folding and scoring. Can be beaded, printed and joined by adhesives.

Dow technicians will be glad to talk over details of how Ethocel Sheeting and Styron can help you in postwar packaging plans—no obligation, of course.

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland
Detroit • Chicago • St. Louis • Houston • San Francisco
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DOW

PLASTICS

FOR BETTER PACKAGING:

SARAN FILM • ETHOCEL SHEETING • STRIPCOAT • STYRON

A fresh p
or

sh point-of-view

on the aromatics picture . . .

WITH PERSPECTIVE BY Givaudan

Already the picture of new and improved perfume and cosmetic products is taking shape. For example, certain of the materials developed by Givaudan to meet wartime needs show promise of interesting peacetime developments in new formulations. Also a gradual renewal of long-curtailed supplies of many time-proven constituents will assure a basis for broad range planning ahead. With this background and with greatly expanded laboratory facilities, Givaudan envisions dramatic innovations and improvements. We look forward to helping you create new effects in your products.

"BUY WISELY . . . BUY GIVAUDAN"

Givaudan-Delawanna INC.

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For success in your Post-War Products...

use a dependable PENN-DRAKE Base...

The importance of the base for cosmetic, medicinal and other products can hardly be over-estimated. Success or failure can hinge on the proper selection of a white oil or petrolatum.

Penn-Drake has much to offer you in this connection—not only a wide range of grades to meet your specific needs, but also highest quality and desirable characteristics for your work. Furthermore, when *special* grades are needed, Penn-Drake can make them.

Select your base from the complete Penn-Drake line, and standardize on it!

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Makers of: White Oils (U.S.P. and Technical); Petrolatums (all grades and colors); INSECTI-SOL (deodorized insecticide base); Deodorized and other Naphthas; Petroleum Sulphonates; Waxes; Industrial and Motor Lubricants and Greases; Fuel Oils and other petroleum products.

"The bigger the family—the better the service"

NEARLY every large family or business proves it! Continental's family will give you perfect packaging service. We've got the facilities and personnel to do it. We'll analyze your problem impartially and come up with the ideal package.

We can meet your needs, for now we cover every phase of packaging—metal containers, liquid-tight paper cups and containers, fibre cans and drums, steel pails and other heavy duty containers.

Uncle Sam is our chief customer now. But keep your eye on Continental! And on Continental's trade-mark, too! It stands for *one* company with *one* policy —to give you only the best in quality and service.

Tune in: "REPORT TO THE NATION" *every Sunday over coast-to-coast CBS network*

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CONTINENTAL PAPER DIVISION

FIBRE DRUMS The Container Co., Van Wert, Ohio

LIQUID-TIGHT FOOD CONTAINERS — Boothby Fibre Can Co., Roxbury, Mass.

PAPER CUPS AND FOOD CONTAINERS — Mono Containers, Newark, N. J.

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Headquarters: 330 W. 42d St., New York 18, N. Y.
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Continental Fibre Cans—These composite cans (with fibre bodies and metal ends) meet a definite packaging need. They bridge the gap between all-metal cans and paper containers, folded boxes or bags. They're made for easy conveyor and filler handling, in a wide range of shapes, sizes, and diameters, with a great variety of metal dispensing closures—"naturals" for safe shipping of drugs, cosmetics and chemicals.

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...making quite a ripple

Cosmetic manufacturers, in an ever increasing number, are standardizing on Meritseal as a closure completely in keeping with their finest products.

Meritseal is a real beauty. The gleaming colors and trim, modern lines have an appeal to feminine eyes that is reflected in their purchases.

But there's more to Meritseal than merely smart appearance. It's also an efficient, air-tight seal . . . and the cost is less than many closures of comparable good looks.

A request, on your letterhead will bring samples so that you can see the advantages of Meritseal . . . right on your own products. Be sure to mention the size of the caps that will fit your package, and your color preference.

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WE ALSO MANUFACTURE POWDER PUFFS, VANITY PUFFS, LOOSE SIFTER POWDER DEVICES AND SPECIAL LAMSDOWNE PUFFS

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perfume around
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lasting bases

In a wide range of odors

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THIOVANIC ACID

VACUUM DISTILLED THIOGLYCOLIC ACID

SPECIFICATIONS

Assay $HS-CH_2-COOH$	• 80.0% min.
Dithiodiglycolic Acid	• 2.0% max.
Iron	• 0.0 ppm
Copper	• 0.0 ppm
Ash	• none
Color - A.P.H.A.	• 50 max.
Odor	• faint sulfidic

PHYSICAL PROPERTIES

(PURE COMPOUND)

Boiling Point	• 96° c/5mm
(Uncorrected)	• 108° c/5mm
Melting Point	- 16.5° c
Specific Gravity	• 1.325 @ 20°c
Dissociation Constant	• 2.1×10^{-4}
Normal Oxidation Potential	• 0.27 volts @ 25°c
Heat of Combustion	• 346.3 $K_c$cals/mole

SOLUBILITY

Miscible with Water, Alcohol, Acetone, Ether, Chloroform, Benzene

With two reactive functional groups, this Mercapto Acid offers interesting possibilities as an intermediate in the synthesis of a variety of products. Apart from its use in Permanent Waving of hair and in Depilating compositions, Thiovanic Acid has many possibilities in Bacteriology, Rubber Reclaiming, Fermentation, Medicine, as an Analytical Reagent, etc., etc.

samples and commercial quantities available from the source...

EVANS CHEMETICS, INC.

250 EAST 43RD STREET • NEW YORK 17 • N. Y.

For Quality Products use Hooker Sulfides in Reactions Like These

In addition to the regular properties of Sodium Sulfide and Sodium Sulfhydrate which make them valuable reagents, another property of the Hooker Sulfides makes these Hooker products first choice among users. The Hooker Sulfides are of a special high quality and purity with extremely low iron content, an important factor in many reactions. The economy of eliminating a settling stage is a further advantage in the use of Hooker Sulfides. Some of the more general and typical uses of these sulfides are given below.

For Organic Sulfides and Disulfides

Sodium Sulfide is widely used in the making of organic sulfides and in conjunction with added sulfur, disulfides are obtained. Examples of this use are in the preparation of benzyl disulfide and diamyl sulfide. In the preparation of the latter, the purity of Hooker Sodium Sulfide results in a high quality product which in turn is used as an intermediate in the production of white solids such as diamyl sulfone, sulfoxide and sulfonium halides.

$$2C_5H_{11}Cl + Na_2S = (C_5H_{11})_2S + 2NaCl$$

$$(C_5H_{11})_2S + O_2 = (C_5H_{11})_2SO_2$$

$$2(C_5H_{11})_2S + O_2 = 2(C_5H_{11})_2SO$$

$$(C_5H_{11})_2S + CH_3I = [(C_5H_{11})_2SCH_3]I$$

For Mercaptans

Reacting alkyl halides with Sodium Sulfhydrate produces mercaptans. An example of this reaction is amyl mercaptan made from amyl chloride according to the following equation:

$$C_5H_{11}Cl + NaSH = C_5H_{11}SH + NaCl$$

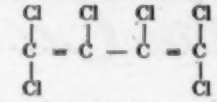
While aryl halides do not enter into this type of reaction, mercaptans of the aromatic series may be made through the reaction of the sodium salts of sulfonic acids with Sodium Sulfhydrate. The preparation of phenyl mercaptan in this way is shown by the following equation:

$$C_6H_5SO_3Na + NaSH = C_6H_5SH + Na_2SO_3$$

The purity of Hooker Sodium Sulfhydrate, especially its freedom from iron is an important factor in these reactions.

CHEMICAL OF THE MONTH

HEXACHLORBUTADIENE



A recent development of the Hooker Research Laboratories and one that is evoking interest among chemists working with natural and synthetic rubber and plastics is Hexachlorbutadiene. Its solvent properties, high boiling point and noninflammability make it valuable for many other uses.
Hexachlorbutadiene, a clear colorless liquid with a mild characteristic odor, is insoluble in water and soluble in alcohol, ether and most chlorinated solvents. It is highly stable and is resistant to hydrolysis by water or mild alkalis.
Among resins found to be compatible with Hexachlorbutadiene are chlorinated rubber, natural asphalt, polyvinyl chloride, vinyl acetate and vinyl polymer.
Technical Data Sheet No. 332 describes the physical properties of Hexachlorbutadiene. Research samples will be supplied when requested on your business letterhead.

For Thioglycols, Thio Acids

Because of the presence of two-OH groups in glycols, two types of sulfur derivatives are possible, those in which one oxygen has been replaced by sulfur and those in which both have been replaced.

$$HOCH_2CH_2Cl + NaSH = HOCH_2CH_2SH + NaCl$$

$$ClCH_2CH_2Cl + 2NaSH = SHCH_2CH_2SH + 2NaCl$$

Reacting hydroxy acids with Sodium Sulfhydrate produces thio acids as for example, thiosalicylic acid from the diazonium chloride of salicylic acid:

$$N_2ClC_6H_4CO_2H + NaSH = HSC_6H_4CO_2H + N_2 + NaCl$$

or thioglycolic acid from monochlor acetic acid.

$$CH_2ClCOOH + NaSH = CH_2SHCOOH + NaCl$$

Sodium Sulfhydrate is used in the preparation of those true thio acids, where one or both of the atoms of oxygen in the carboxyl group are replaced. The preparation of thiobenzoic acid from benzoyl chloride and dithiobenzoic acid from benzotrichloride:

$$C_6H_5COCl + NaSH = C_6H_5COSH + NaCl$$

$$C_6H_5CCl_3 + 2NaSH = C_6H_5CSSH + 2NaCl + HCl$$

For Sodium Thiosulfate

Sodium thiosulfate or hypo is made by reaction of Sodium Sulfide or Sodium Sulfhydrate and sulfur dioxide. Three of the equations that can be written for this reaction are:

$$2\,Na_2S + 3SO_2 = 2Na_2S_2O_3 + S$$

$$2\,Na_2S + 2SO_2 + 2NaHSO_3 = 3Na_2S_2O_3 + H_2O$$

$$2\,NaSH + 4NaHSO_3 = 3Na_2S_2O_3 + 3H_2O$$

These chemicals also have special use in the cosmetic, metallurgical, photographic, textile and dyeing fields. Our technical staff is ready to help you in the application of these and other Hooker chemicals to your particular problems. Data sheets and samples on any of these Hooker chemicals will be sent you when requested on your letterhead.

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Caustic Soda	Muriatic Acid
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Benzotrichloride	Benzoyl Chloride

8322

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Plaskon molding materials are plastics that are especially resistant to the chemical and physical action of a wide variety of products that must be packaged. Plaskon is completely impervious to the effects of alcohol, acetone, or other common organic solvents. It is not affected by oils, fats or greases. Because it is odorless, tasteless and inert, it has no effect upon any products with which it comes into contact.

Plaskon can be molded in large quantities at very economical prices. Distinctive designs and shapes can be secured to give new individuality to packages.

Plaskon is available in a wide range of beautiful, permanent colors that improve the appearance of any container, catch the eye and help make sales. We can give you helpful assistance in suggesting designs, qualified Plaskon molders, and technical advice so that you can efficiently adapt Plaskon Molded Color to your manufacturing and sales programs.

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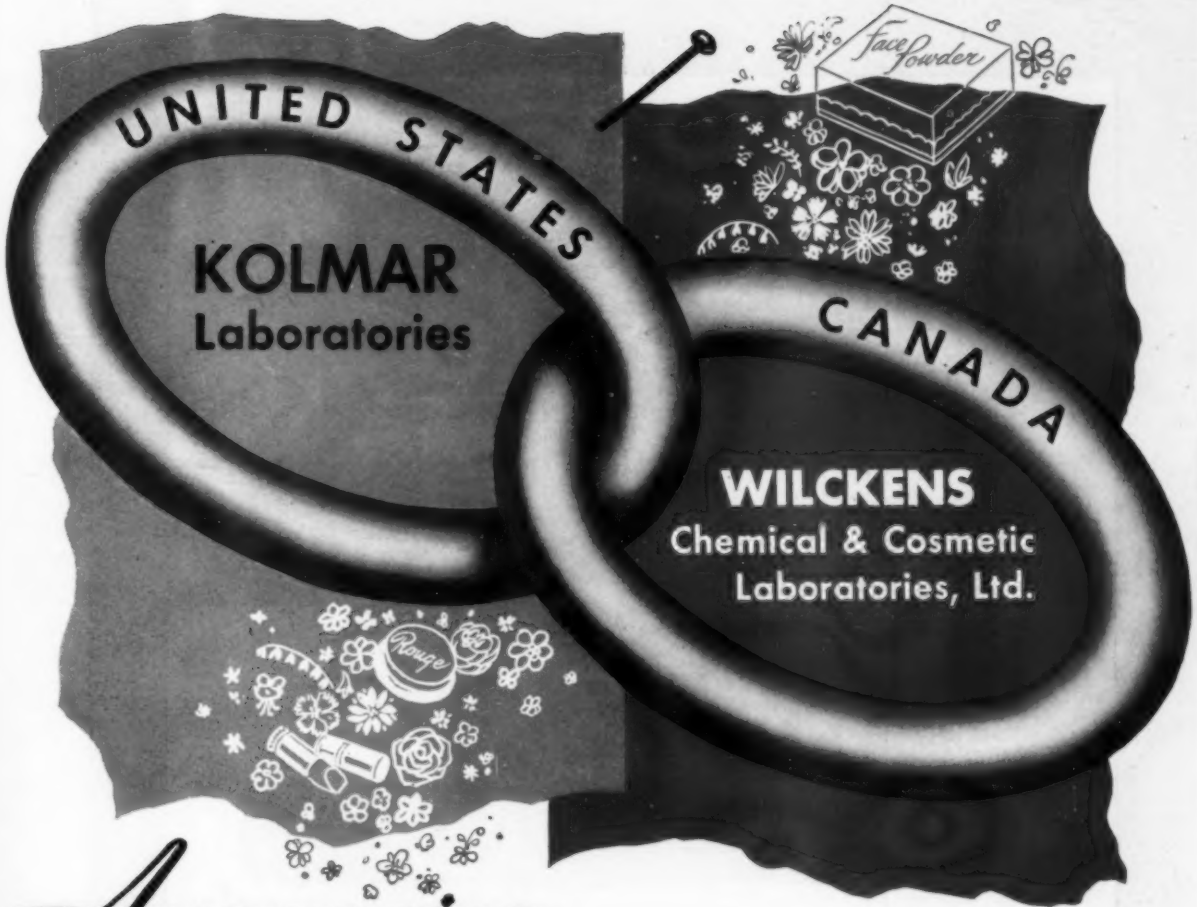
Canadian Agent: Canadian Industries, Ltd., Montreal, P. Q.

PLASKON
TRADE MARK REGISTERED
MOLDED COLOR



Announcing KOLMAR OF CANADA

To make it possible for our customers and friends to obtain the same formulae and outstanding quality products in Canada, Wilckens Chemical & Cosmetic Laboratories, Ltd. of Toronto have become affiliated with Kolmar Laboratories.

Rather than build a plant in Canada, Kolmar found it more expedient to take advantage of the facilities of the Wilckens Laboratories, thus forming a mutual relationship between two well-established, favorably known institutions—giving Canada a service in private-label cosmetics manufactured under the same processes so successfully used by Kolmar in the United States. It means assurance of uniform, superlative quality and integrity of product that will produce sales and repeat sales for you.

KOLMAR is the world's largest make-up specialist. The line includes Lipstick, Dry Rouge, Creme Rouge, Loose Face Powder, Cake Make-up, Foundation Creams, Liquid Make-up, Eye Shadow, Mascara, other Cosmetics, and Vanity Puffs.

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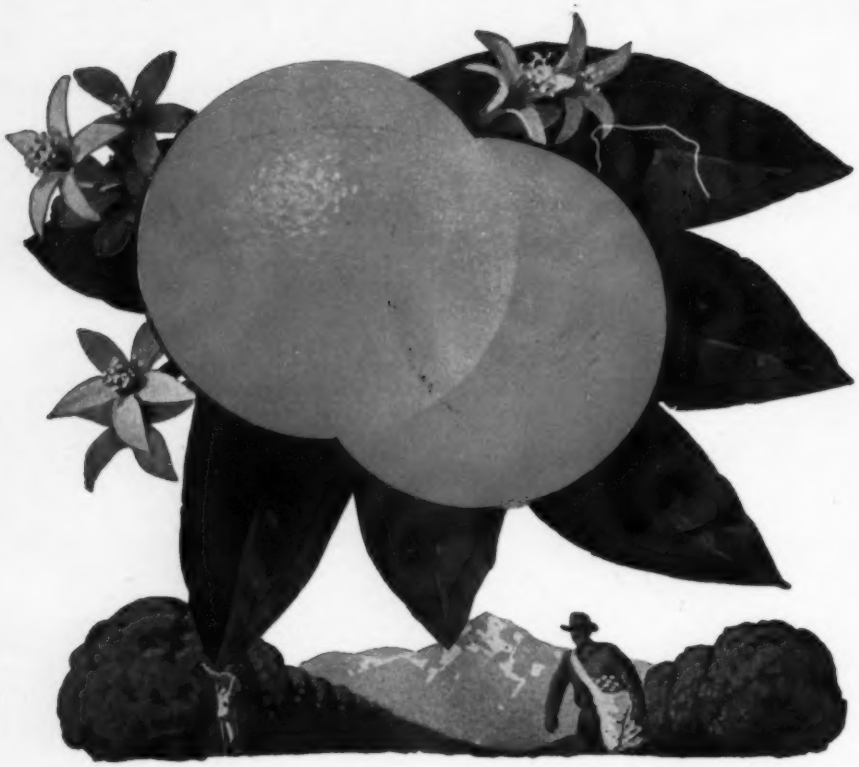

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First in America for Orange Flavor

Give it all your tests for *quality, uniformity,* and *strength.* The results speak for themselves! You'll find Exchange Oil of Orange puts more *real orange flavor* in your products than any other orange oil.

Because it's made only of fruit from the "Sunkist" groves of California... in the largest orange products plant in the world... accepted and reordered by men and women who know orange flavor.

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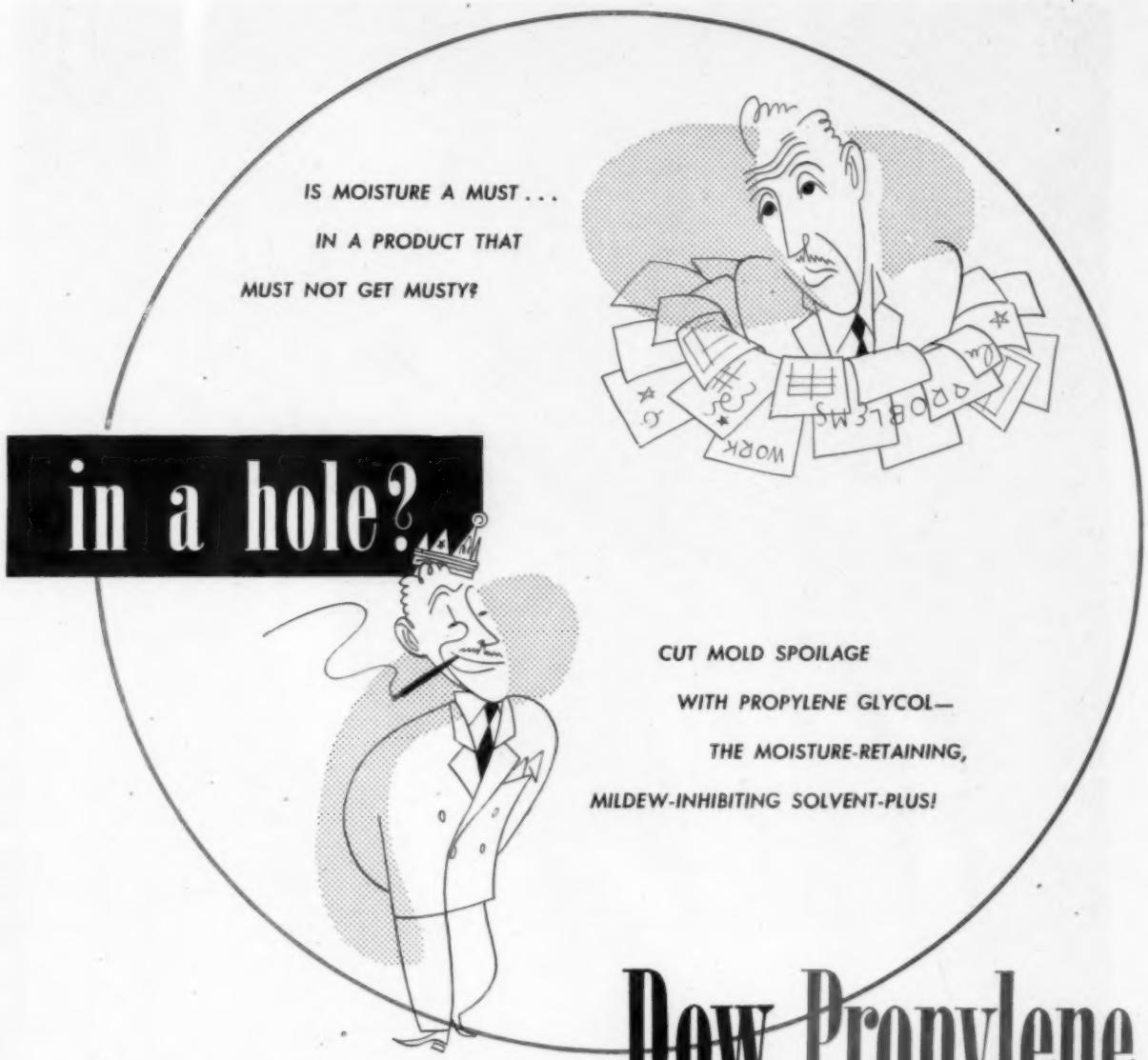

Dow Propylene Glycol, n.f.

So you have a product that must stay moist . . . but of course you don't want mold! That means some extra planning, for a moist product is a natural target for molds. Now's the time to consider Dow Propylene Glycol, N.F. . . . the single low-cost ingredient that provides moisture retention and mold resistance at the same time.

Dow Propylene Glycol is helping many foods, cosmetics, pharmaceuticals, and other products to by-pass the moisture-mold problem today. For among the *extra* advantages of this diversified, low-cost solvent are excellent mold-inhibiting action and moisture-retaining qualities. And it's manufactured to National Formulary standards of purity . . . may be included in products for internal use.

This helpful, cost-cutting ingredient may solve your particular problem. Get the full story of Propylene Glycol . . . send for Dow's free booklet today!

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There have to be sound reasons for *Durlin's* world wide reputation as the foremost name in bulk *Nail Enamel.* Much better reasons than a superior uniform product, a proven reputation for alertness in research, a modern factory manned by personnel experienced in nail lacquer production.

Durlin's reputation lies in a customer service that has paid big dividends to the many users of their *Nail Enamel. Durlin* color sense, shown by an early awareness of fashion trends, selection of colors and aid in packaging has many times helped customers to that "extra edge" which brings success.

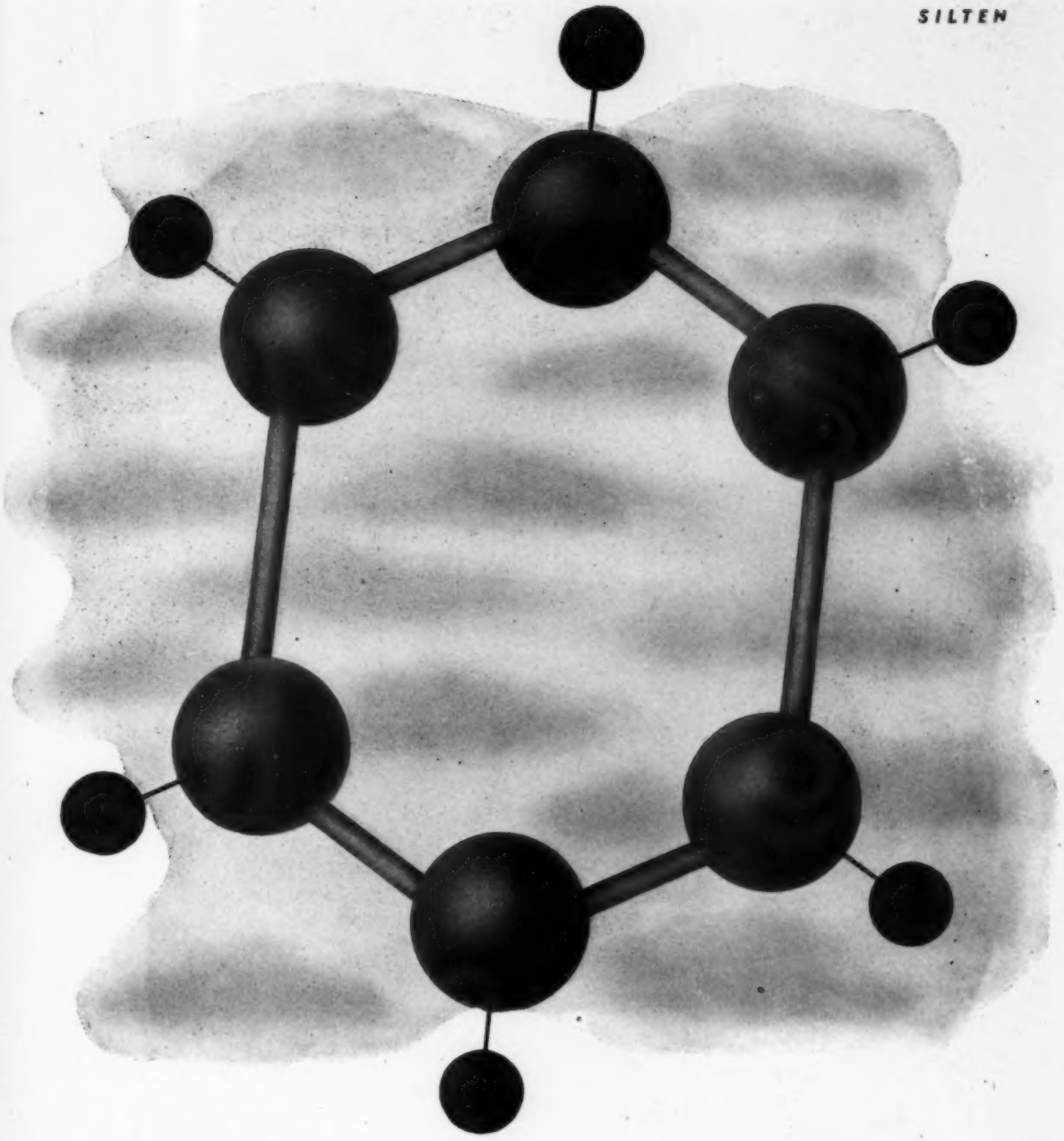
When you think of *Durlin Nail Enamel*, think also of *Durlin Service*.

DURLIN CO.

744 Broad Street — Newark 2, N. J.

★

SILTEN



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the *scientifically* developed synthetic Bergamot oil

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A *permanent* replacement product for Lanolin

HYALIN is a powerful concentrated water-in-oil emulsifier. It has the tackiness and the emollient properties of Lanolin, for which it can be substituted, either wholly or in part, without any other change in formulation. It is freely available in all quantities.

HYALIN is more than a product that was created to tide over a war-born emergency: it has certain definite advantages that entitle it to a permanent place in cosmetic formulations.

HYALIN is very stable in odor as well as in color. Its straw-like odor will not eventually develop a sheepy, goaty character. Its color will not ultimately darken, to cause discoloration in the products in which it is used.

Due to its powerful emulsifying properties, **HYALIN** can be used in smaller percentages than Lanolin in new formulations. It is particularly suitable for lipstick as it is in itself a good vehicle for bromoacid and pigments.

HYALIN is well worth examining, not only for its immediate use, but equally so for its future use. Working samples will gladly be sent upon request.

VAN DYK & COMPANY
INCORPORATED 1904

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Western Office: 1282 Sunset Boulevard, Los Angeles.

. . . a new aromatic body. Its warm and flowery note will give character to your compounds.

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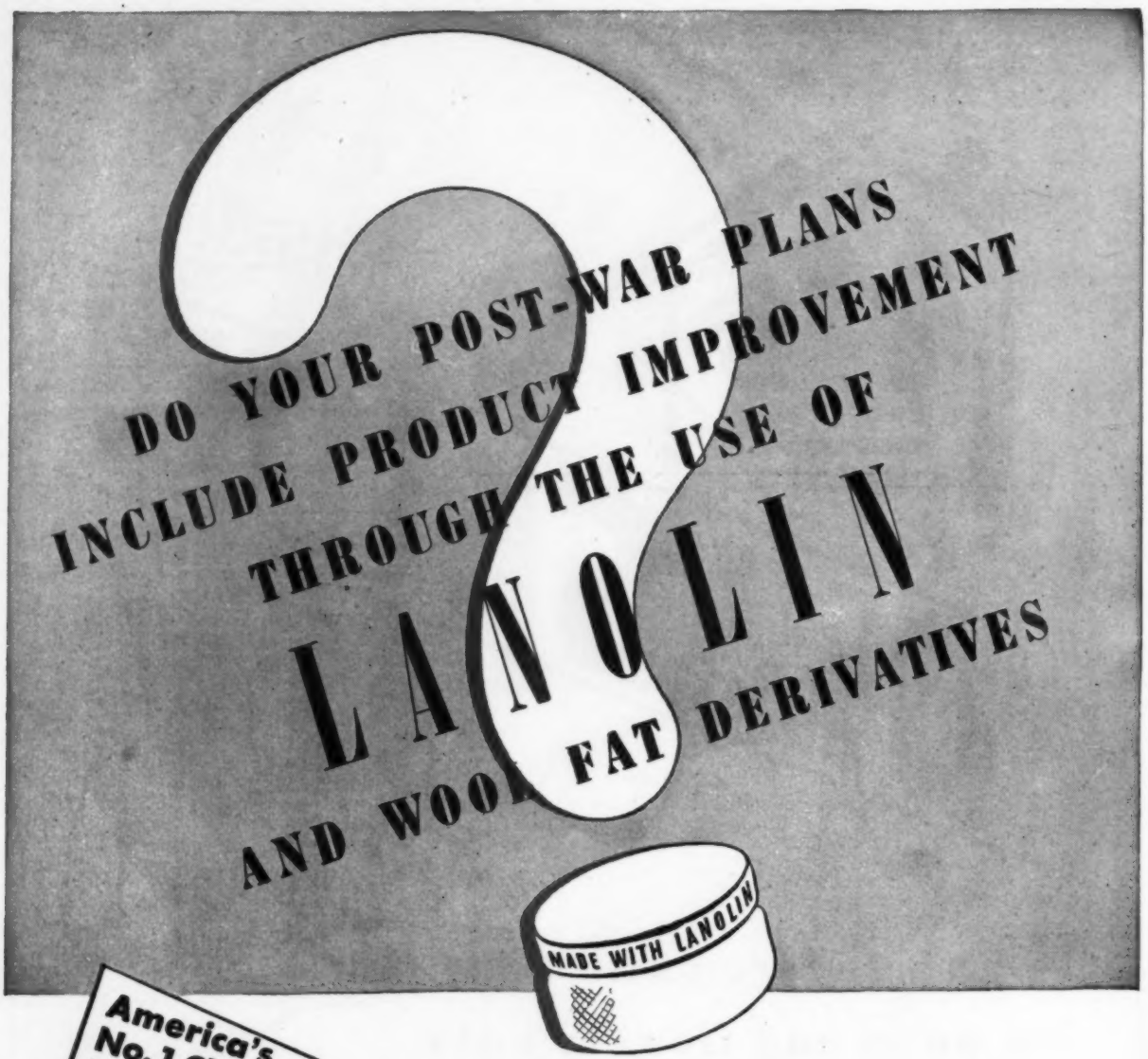

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Your chemists are free to dabble to their heart's content with samples that we'll be glad to supply. And there's no charge either for the Lanolin *know-how* which has made Malmstrom *"America's Largest Supplier of Lanolin and other grades of Wool Fat."*

To get the jump on tomorrow, start experimenting today with Malmstrom's NIMCO BRAND Lanolin.

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Is your product lifeless?

depend on du pont ASTROTONE BR REG. U. S. PAT. OFF. to brighten it

THE ROUNDING, full blending, and fixative values of Du Pont Astrotone* BR will give new life to your product. Astrotone BR is versatile . . . wholly soluble in and compatible with all perfume materials. It brings exquisite harmony to fine perfumes, softens harsh edges and gives subtlety in lower priced bouquets.

*A true synthetic, product of Du Pont research, Astrotone BR belongs to the family of compounds of which musk tonquin is a member. It should not be confused with the chemically different nitro musks.

du pont aromatics

DU PONT

REG. U.S. PAT. OFF.

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. . . The fragrant principle of jasmine, now produced synthetically by the Penick Laboratories. Used in the finest and costliest perfumes . . . Powerful—Economical.

Jasmine Artificial Extra

. . . A really outstanding Oil Jasmine, with the Jasmonene base. Use as is, or add it to your own jasmine preparation and thus obtain the true jasmine note.

OIL COSTUS

Distilled in our own plant, from the choicest selected roots —one of the many products which we import direct from the countries of origin . . . *Your inquiries are invited.*

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In this mood and in this period, D & O was founded to serve the needs of the drug sundries industry, including perfumes and cosmetics, a veritable infant. But the lusty infant grew and D & O with its research and compounding laboratories grew apace...and both flourished.

Today the priceless heritage of experience and knowledge accumulated throughout the years enables D & O to anticipate trends, to meet new conditions and to solve new problems.

New techniques, new materials and aromatic chemicals have been developed. Myriads of new and finer fragrances are being created. The same tenacity of purpose—to serve your perfume and cosmetic needs—remains as alive today as it was nearly a century and a half ago.

Let D & O solve your perfuming problems.

Dodge & Olcott, INC.

180 VARICK STREET, NEW YORK 14, N. Y.

BOSTON • PHILADELPHIA • CHICAGO • ST. LOUIS • LOS ANGELES

Plant and Laboratories: Bayonne, N. J.

Take this, Hippiatrus—it will cure "big neck"

Long before Dr. Coindet, in 1820, introduced iodine in the treatment of goiter, the ancient Greeks used it in the form of burnt sponge to overcome what they called "big neck."

Iodine was first observed about 1811 by Courtois, who evolved it from the ashes of seaweeds. The name "iodine" means violet-colored, and describes the beautifully colored vapors which result from its heating.

A remarkable characteristic of iodine is that it is a solid at room temperature, but when heated, changes to a gas without passing through an intermediate liquid state!

For iodine products of uniformity and dependability, specify MALLINCKRODT. Over fifty products from iodine—including Tinctures; Salts of Ammonia, Barium, Cadmium, Calcium, Iron, Lead, Lithium, Mercury, Potassium, Silver, Sodium, and Strontium; Animal Feed Mixtures, etc.

MALLINCKRODT CHEMICAL WORKS

FINE CHEMICALS Mallinckrodt SINCE 1867

78 Years of Service to Chemical Users

Mallinckrodt Street, St. Louis 7, Mo. • 74 Gold Street, New York 8, N. Y.

CHICAGO • PHILADELPHIA • LOS ANGELES • MONTREAL

"I'm wiring the boss to get busy on a men's tonic containing the male hormone, I can sell millions of bottles."

KEEPING POSTED

Checking Drug Labeling

AN INTERESTING example of how FDA inspectors can get at the root of adulteration of drug products was recently related by George P. Larrick, of FDA. It seems that FDA inspectors were informed that a firm was adulterating their natural estrogenic hormone injections sold to physicians. The inspection did not immediately confirm the rumor and the president of the manufacturing firm protested that their operations were entirely legal. The product was made from the urine of pregnant mares, and the inspector was able to show conclusively how much urine the manufacturer obtained. Then from the records he showed that the volume of sales many times exceeded the amount of natural estrogenic hormones that could be manufactured from the raw material acquired. Confronted with the evidence the manufacturer conceded that the product they were selling as natural estrogens was not this substance but that the potency had been increased many fold by converting natural estrone into synthetic estradiol, the latter product being sold at a much higher price than it would command if sold for what it is. This discovery led to further investigations and of 37 firms investigated, action was recommended against 24.

Vanillin Tablets in the Army

VANILLIN tablets have been used by the Army in large quantities for flavoring purposes. One day a GI, disliking the chlorine taste of water purified on the spot with a chlorine chemical tablet, dropped a vanillin tablet in the water to improve its taste. Imagine his surprise when he found that the vanillin tablet not only neutralized the chlorine taste, but that the chlorine likewise neutralized the vanillin taste leaving the water tasteless as it should be. Now the Army wants greatly increased quantities of these vanillin tablets for this specific purpose.

Doctors and Pronunciation

THE way the doctors of this country kick around the pronunciation of words gives us a pain in the neck. New drug products for the most part are developed today by chemists. Chemists have very simple rules of pronunciation and upon hearing them pronounce a word, repetition of the pronunciation is generally quite easy. The chemists quite correctly pronounced penicillin with the accent on the second syllable only to have the medical profession change the pronunciation to accent on the third syllable when the chemists' pronunciation was already official in medical dictionaries. Now come the amino acids with which chemists have been experimenting for many long years. The chemists, as certified to by the American Chemical Society, have accented the second syllable to pronounce amino to rhyme with canteen-o. But not the doctors. Now that they are being instructed about these products and their uses as developed by the chemists they have seen fit to pronounce the word to rhyme with famine-o. There is no reason for this change since the word "amine" has always been, and still is pronounced with the accent on the second syllable. The doctors have not been too successful with the pronounciation of words right in their own backyard. Listen to how often doctors in certain parts of the country pronounce duodenum with the accent on the second syllable, while all medical dictionaries place the accent on the third syllable.

Name Three

AN INTERESTING stipulation signed with the Federal Trade Commission by a manufacturer who has advertised his product as a "Hypo-Allergenic Cosmetic" in the Journal of the American Medical Association for a long time, contains the following statement:

"That it will cease and desist from representing that the cosmetics which it offers for sale are safe for sensitive skins, in the sense that they would be safe under all conditions, including skins which may be allergic to some ingredient contained in the preparations and that thousands of doctors have prescribed Hypo-Allergenic Cosmetics, or that any members in excess of the true total have so approved or recommended them."

In this stipulation it will be noted that the manufacturer is required not to name any amount of physicians in excess of the precise number who actually prescribe the products. We sense that the Commission is arriving at the point of asking the person who says glibly that he can name hundreds or thousands of anything, "Name three."

New Buildings for Drugs

PLANS, immediate and post-war, for building new plants are being laid by a considerable number of manufacturers in this industry. The latest plans are announced by Winthrop Chemical Company for a $500,000 windowless ampoul building featuring blowers in the entrance lobby for "dedusting" of all employees and visitors. Those entering the building will pass single file in front of the blowers which will remove dust, dirt, and lint from their clothing. Similar units will be located at other inside control points. This feature is described as part of the over-all plans of the building "with a view to a more complete elimination of germs, dirt, dust, and atmospheric variations than has ever before been attempted in a pharmaceutical laboratory."

Light for the building will be provided by horizontal panels of glass brick, and the interior will be subdivided into individual contamination-proof compartments. Interdepartmental visibility on each floor will be provided by glass panels. Ultra-violet lamps are to be installed in the air-conditioning ducts leading to all production departments to insure the delivery of germ-free air. Glazed tile walls and double-glazed partitions, designed without moldings or ledges, a suspended ceiling with recessed flourescent lighting fixtures; and concealed piping and mechanical equipment will expidite the maintenance of dust-free conditions at all times. Completion of the building is scheduled for Fall.

This is the type of building that this industry should have for the production of its products, particularly for the production of a large part of its drug products. Within recent years the trend has been to this building of this kind for products which are used by doctors in such a manner that infection of the patient might result from contamination of the product. Recently constructed plants of this industry are all beautiful to behold both inside and out, and furthermore all possible precautions have been taken to protect products during their manufacture. After all, the results of contamination were clearly brought to the foreground by the very nature of Sir Alexander Fleming's discovery of penicillin.

Women Get More Colds Than Men

MORE women than men suffer from colds and office employees are hit much harder by colds than are factory employees, according to a two-year study conducted by Dr. Joseph H. Kler, of New Brunswick, N. J. The common cold in industry, according to Dr. Kler, is responsible for more than one-third of the total number of days lost in American factories, causing a loss of 100 million working days each year with the annual cost running up to two billion dollars. Further observations are:

There is a definite pattern to the incidence of colds, with the highest peak in December and the lowest in July.

The incidence of colds was consistently higher in Chicago than in the East, especially during the Summer months.

There is a definite correlation between temperature and the onset of colds, every sudden drop in temperature being followed in a day or two by a rise in the number of colds.

The highest incidence of colds was found in the age group 20 to 29 years and the lowest in the age group above 50 years and over.

There were more colds among women than among men. In New Jersey there were more colds among women throughout the year, while in Chicago women had more colds only in the Winter months, although the total for the year was still higher for the women.

There were consistently more colds among office workers than among factory employees.

There were fewer colds in air conditioned plants, with the incidence of colds highest in drafty places.

More colds start on Monday than on any other day of the week, this being especially true of colds among men.

Posture is an important factor, with the incidence and severity of colds lowest among those whose work necessitates walking about most of the time.

Smoking apparently has little effect upon colds.

"A notable difference exists between the New Jersey and Chicago plants," says Dr. Kler. In the latter much more attention is paid to the treatment. This probably is the explanation for the lower time loss in Chicago plants even though the incidence and the severity of the colds is higher than in the East."

Four and two-tenths days per thousand working days were lost in New Jersey because of colds and three and one-tenth days per thousand working days in Chicago. Absenteeism due to colds was twice as high in offices as in factories, six and nine-tenths days and three and two-tenths days respectively.

Census of Manufactures and of Business

THE Census of Manufactures will be revived and will be taken for the year 1945 if H. R. 3146 becomes law. This bill also provides for a sample census of business for 1945, a consumer income study, a consumer expenditures and savings study, a 1945 sample census of population, and data on employment and unemployment. The National Wholesale Druggists Association, together with the National Association of Manufacturers, the Association of National Advertisers, the Advertising Federation of America, the American Association of Advertising Agencies, and the American Statistical Association, are opposed to a complete census of manufactures being made together with a *sample* census of business. They want a *complete* census of business taken together with a *complete* census of manufactures for the same year. According to the N. W. D. A., the objection of these organizations is that a *sample* census of business "will serve no purpose except to indicate that we have been in an era of high business activity, a fact which is self-evident to all of us, and a fact further which is an obvious direct result of hundreds of millions of dollars of war expenditures. A *sample* census would not be a detailed breakdown by trades and by small local areas which are essential to market planning.

"The objection to taking a *complete* census of business at this time appears to revolve around the manpower problem. It is estimated that some five hundred man years would be required to the *sample* census, whereas some four thousand man years would be required for the complete census of of business."

More Deaths from Sleeping Tablets

CHIEF Medical Examiner Thomas Gonzales, of New York City, reports an alarming increase in the number of deaths in the city from consumption of various types of sleeping tablets, citing an increase from this type of death from a normal of 40 per year to 47 in the last three months. The situation is now before the New York City Health Department for stricter supervision of all trade in such products.

Folic Acid Synthesized

ANOTHER member of the vitamin B complex—folic acid—has been synthesized so that it will now be available in sufficient quantity to determine the exact extent to which it will be useful in therapy. This product has been isolated for some time and important claims have been made for it. As production of this new synthetic material progresses, the cost and selling prices will be lowered and it will eventually be freely available to all who are in need of it. The synthesis, developed by research workers of Lederle Laboratories—a unit of American Cyanamid Co.—in conjunction with research workers of Calco Chemical Division of American Cyanamid Co., will bring to the medical profession in sufficient quantity a product which is yielded by fresh livers—one of the best sources—to the extent of only one-tenth of an ounce from one ton of fresh livers.

Antimalarials Made Available

ANTIMALARIALS (quinine for parenteral use and atabrine, as well as totaquine) are available in sufficient supply for civilian use, according to WPB. Demand for antimalarials has increased due to the discharge of a small percentage of veterans who will require treatment during periods of relapse of the disease.

More Alcohol for the Industry

GOOD news was welcomed by manufacturers of drugs and pharmaceuticals when they were informed that they were to receive for the month of August all the alcohol that they requested. Total allotments for August distribution to manufacturers of cosmetics and oral antiseptics were approximately equal to one-twelfth to total 1944 usage, excluding the amount allotted in the pre-holiday bonus. This means about the same quantity as was released in July. This easing of alcohol supplies is resulting from reduced Government needs resulting from satisfactory production of butadiene for rubber production from petroleum plants and a slight reduction in over-all requirements for rubber production. Total requirements of alcohol for the Government have been revised downward from 548 million gallons estimated in June, to 528 million gallons, or a cut of 20 million gallons. These totals consist of the following: June estimate for direct military and lend-lease 52 million gallons, against present estimate of 62 million gallons; synthetic rubber 292 million, against 259 million; indirect military and civilian 168 million, against 259 million; anti-freeze 36 million, against 36 million.

The Government stockpile as of July 1, was 85,600,000 gallons. Requirements for September are not expected to exceed those of August.

New York Restricts All Antibiotics

THE New York City Board of Health has taken sweeping action against over-the-counter sales of all types of penicillin preparations and all types of other antibiotic drugs, effective August 1. This means that none of these preparations, whether available now or to be available in the future, whether as yet discovered or not, can only be sold to persons presenting written prescriptions of a physician, dentist, podiatrist, or veterinarian, except in cases of preparations which the Board of Health at some future date may specifically exempt prom the provisions of this ruling.

Reasons given for the ruling by New York City Health Commissioner Ernest L. Stebbins are:

"Indiscriminate use of penicillin and other antibiotics might be dangerous. One of the hazards is that under-treatment may alleviate the symptoms of the illness without curing the disease which, in turn, may continue to be communicable to other persons and to produce damage to the infected person."

Commissioner Stebbins states that "There is also accumulating evidence of possible importance of the development of penicillin fast strains in persons who are inadequately treated, ... (and) antibiotic drugs have been recently developed and there has not been sufficient time to determine the possible toxic reactions."

New Labeling Regulations

WITH respect to the new regulations for the labeling of drug products which become effective in October, we have received from Ben L. Blue, an attorney of Los Angeles, a letter indicating that a slight error was contained in the article by Erwin di Cyan, on these regulations, which article appeared in our April issue. The letter reads in part:

"I have carefully read the amendments, particularly in respect to Sec. 502(f) of the Federal Food Drug and Cosmetic Act, and it is my sincere opinion that Dr. di Cyan has made an error which is based on his misconstruction of the words 'label' and 'labeling.'

"The definition of the word 'label' is set forth in Sec. 201 (k) of the Act, and the definition of the word 'labeling' is set forth in Sec. 201(m) of the Act. Each has a different meaning, and Dr. di Cyan, in reading the act, evidently did not differentiate between the definitions. Simply stated, 'label' means a display which is readable on or through the outside container of the wrapper itself. 'Labeling' means printed or written matter either on the article or its container or wrapper, or accompanying the article.

"By reason of this distinction, I do not believe that the Act contemplates the requirement that the label itself (to wit, the outside wrapper) must contain: (a) conditions indicating the use of the drug; (b) full directions for all conditions in which the use of the drug is recommended; (c) size of the individual dose; (d) its frequency of administration; (e) the duration of its use; (f) time of administration; and other information.

"Information such as above set forth may be contained in the labeling, and need not be contained on the label. It is of common knowledge that many drugs could not possibly have room on the label to give full and complete directions and other matters as set forth in the foregoing paragraph."

Labeling Estrogenic Products

THE subject of labeling of estrogenic preparations is a matter of current interest to the officials of the Food and Drug Administration and the sellers of these products. The difference of opinion existing between the FDA officials and some sellers lies in definition of "natural" against "synthetic." The FDA claims that natural estrogens come only from the urine of pregnant mares that is concentrated in a manner that none of ingredients are changed in form. This claim is made by the FDA because if the concentrate is boiled for a protracted period of time, the estrone is converted into estradiol, and the FDA claims that the estradiol thus produced is not natural, but synthetic. The only preparation that the FDA permits to be labeled a "natural estrogenic substance derived from the urine of pregnant mares" is a substance containing 85 to 90 per cent of estrone, and the remainder consisting of estradiol, equilin, and equilenin.

The difficulty seems to revolve around the fact that while estrone brings a higher price, according to the manner of assay used, estradiol is about five times as potent by weight as estrone. Naturally here is condition that leads to the possibility of illicit gains to result from mislabeling.

However, the U.S.P. Revision Committee is now at work on a monograph on "Mixed Estrogens." When this monograph is available and becomes official there should be no more complaints on the part of sellers of estrogenic preparations. For then their products can either be "Natural" as defined by the FDA, or they can be "Mixed" as defined by the U. S. P. and in every way be official and acceptable.

Synthetic Rubber Powder Puffs

AFTER the war with Japan ends, women will again have rubber powder puffs, but the ones that they get in the post-war period will be better quality than the ones they previously had because the post-war puffs will be made of synthetic rubber rather than of natural rubber. Howard D. Herbert, of the Goodyear Rubber and Tire Company's Airfoam Sales Department, who has been distributing samples of the new light-colored product to powder puff manufacturers, says that it will be available for cosmetic applications as soon as war conditions permit WPB to approve this new use for synthetic rubber latex. Aside from powder puffs, other uses are anticipated for this industry, according to Mr. Herbert, such as lipstick and cosmetic stocking applicators.

Taxability of Shampoos

THE Treasury Department has issued, under date of July 14, a ruling relative to the taxability of shampoos. The ruling reads as follows:

"Attention is called to the application of the retailers' excise tax on toilet preparations, etc., (increased from the rate of 10 to 20 per cent, effective April 1, 1944) to sales at retail of shampoos.

"Any shampoo (1) containing 5 per cent or less of saponaceous matter, regardless of advertising claims, or (2) containing more than 5 per cent saponaceous matter but designed or recommended as a hair tonic or dressing, or for waving, bleaching dyeing, tinting or otherwise imparting an artificial appearance to the hair, is subject to the tax when sold at retail.

"In order that collectors may inform retailers concerned whether certain shampoos are subject to the tax there are listed below those shampoos which have been held not subject to the tax by this office, based upon chemical analyses and other information furnished by the manufacturers or distributors showing that the products contain more than 5 per cent saponaceous matter and indicating that they are recommended in advertising matter solely for cleansing purposes. Any change in advertising matter to the effect that one of these shampoos is to be used for toilet purposes other than cleansing the hair and scalp will render retail sales of the product subject to the tax on and after the date of such change, regardless of the amount of saponaceous matter in the product."

It will be noted from this ruling that while shampoos containing 5 per cent or less of saponaceous matter are still subject to the tax, those products containing more than 5 per cent of saponaceous matter are no longer free from tax if they are recommended for purposes other than cleansing. Therefore, freedom from tax cannot always be determined by chemical composition alone, but advertising claims must also be considered.

Shampoos held not taxable by the Treasury Department on the basis of this ruling are:

Admiracion Oil Shampoo Treatment
Admiration Foamy Shampoo
All-Purpose White Kream Shampoo
Almay Tar Shampoo
Almay Sulfonated Oil Shampoo
Amami Camomile for Blondes (Shampoo)
Amami for Gray Hair (Shampoo)
Amami Plain (Shampoo)
Apex Vegetable Oil Shampoo
Ardena Soapless Oil Shampoo
Barcelona Castile Shampoo
Breck pH 8 Lather Oil Shampoo
Breck Lacene Shampoo
Breck Shampoo Regular
Canthrox Shampoo
Camomile Shampoo (Yardley)
Castile Shampoo (Stanley)
Castile Soap Shampoo (Ogilvie)
Conti Castile Shampoo
Coconut Oil Shampoo (Stanley)
Co-Op Soapless Shampoo
Daggett & Ramsdell Perfect Shampoo
Dandruff Remover Shampoo (Shelton)
Dara Soapless Shampoo
Detergent Lathering Shampoo (Shelton)
Drene Shampoo
Drene with Hair Conditioning Shampoo
Drezma Shampoo
Dr. Ellis Vegetable Oil Shampoo
Edna Wallace Hopper's Fruity Shampoo
Empress Lathering Oil Shampoo
Fitch's Dandruff Remover Shampoo
Fitch's New Process Oil Shampoo
Fitch's Saponified Coconut Oil Shampoo
"42" Eucalyptus Oil Shampoo
Four Penny Shampoo
Glo-ver Beauty Soap Shampoo
H. Q. Z. Liquid Shampoo
Halo Shampoo
Helene Curtis Cream Shampoo
Helene Curtis Duchess Soapless Oil (Shampoo)

Helene Curtis Duchess Lathering Oil (Shampoo)
Helene Curtis Full-O-Foam (Shampoo)
Helene Curtis Tru-Art Lather Shampoo
Helene Curtis Tru-Art Medicated Shampoo
Helene Curtis Milky Shampoo
Herbex G. O. S. Shampoo
Herbex Oil Shampoo
Hi-Hat Pine Tar Shampoo
Jo-Cur Vegetable Oil Shampoo
Kreml (Shampoo)
Kubak Shampoo
L. B. Foaming Shampoo
Laco Shampoo
LaJac Coconut Oil Shampoo
LaJac Pine Tar Shampoo
Larieuse Shampoo
Lathering Oil Shampoo (Gcdefroy)
Latherless Shampoo (Pine Aroma) (Ogilvie)
Lemon Shampoo (Stanley)
Lentheric Shampoo
Lucky Tiger Magic Shampoo
Lucky Tiger Oil Shampoo
Lucky Tiger Beauty Oil Shampoo
Mahdeen Shampoo
Marchand Castile Shampoo
Mar-O-Oil Shampoo
Mar-O-Oil Super Foamy Shampoo
Mulsified Coconut Oil Shampoo (Watkins)
Naminoo Oil Shampoo
Natural Coconut Oil Shampoo
Nourishine Soap Shampoo
Old House Shampoo
Old House Castile Shampoo
Old House Pine Tar Shampoo
Olive Oil Shampoo
Opal Coconut Oil Shampoo
Packer's Shampoo with Pine Tar
Packer's Shampoo with Olive Oil
Palmolive Shampoo
Pinaud Liquid Shampoo
Rap-I-Dol Conditioning Shampoo
Shampene (Shampoo)
Sheen-Tone Cream Shampoo
Siroil Shampoo Soap
Soap Shampoo (Shelton)
Soy Bean Oil Shampoo (Wrisley)
Tar Shampoo (Stanley)
Tender Age Shampoo and Skin Cleanser (Nyal)
Van Ess Shampoo
Wildroot Coconut Oil Shampoo
Wildroot Taroleum Shampoo
Woodbury Coconut Oil Castile Shampoo
Zeno Fluff Shampoo

Ruled taxable under this order are the following:

Amami Henna Shampoo
Blondex Shampoo
"569" Hair Lightener Shampoo
Golden Shampoo
Helene Curtis Cold Wave Shampoo Neutralizer
Henna Shampoo (Nestle-Le Mur)
Henna Shampoo (Stanley)
Henna Shampoo (Yardley)
Henna Shampoo Powder (Ogilvie)
Hennafoam Gleam Shampoo
Jordeau Rinseless Shampoo
Minipoo Dry Shampoo
Raymonde's Presoftening Shampoo
Scal-Glo Shampoo
Shalle Presoftening Shampoo
Tintz Color Shampoo Soap (In all shades).

Rejected Face Powder Theft

A THEFT of rejected face powder that could have caused the manufacturer much greater damage than he had already suffered in the rejection of the material was caught in time in New York City. It seems that the Revlon Products Company had recalled from the market a very large number of boxes of face powder that was found not to be up to standard. In order to dispose of this material, the company arranged with the Department of Sanitation of the city to have it destroyed at a charge of $3.50 per truckload, the lot consisting of some eighteen truckloads. A driver of a Department of Sanitation truck is alleged to have stolen 3,000 boxes, valued at $2,500 from the pile in the incinerator yard, and is alleged to have sold these goods to a retailer for $190. The retailer offered the goods for sale in his store, but when he was apprehended for receiving stolen goods, powder worth $1,600 was recovered.

Pharmacopoeia's 125th Anniversary

THE U. S. Pharmacopoeia is observing its 125th anniversary this year. First published in 1820, largely from the efforts of Dr. Lyman Spalding, the U.S.P. replaced the several local pharmacopoeias then in existence, until today the U.S.P. and its offspring, the National Formulary, and the Homeopathic Pharmacopoeia, although owned and controlled by private groups, have been adopted as National standards by law.

Post-War Business

CONSIDERING the cutbacks that are following the end of the war in Europe and the cancellations that will immediately follow the end of the war with Japan, the volume of business in this country is heading for a serious shrinkage. The only bright spots in this dark sky are the fact that the durable goods of the Nation are on their last legs, many people have money salted away in war bonds and other things, and reduced taxes following the end of the war will result in a larger percentage of disposable income.

So far as this industry is concerned, the dollar volume of drugs and cosmetics sold is in the main dependent upon the disposable income. It is true that the volume of drug products sold are dependent in part and inversely upon the state of health of the nation; if the health of the nation is poor, sales of drugs are high. But if the income of the nation is low when the state of health of the nation is poor, drug sales are not as high as they would otherwise be. Also the volume of sales of cosmetics and perfumes likewise follows the disposable income of the nation, so it is the disposable income that must be watched.

Doubtless there are going to be many difficulties in the post-war world, but it would appear that many of these difficulties are going to be in the direction of forcing national income to new high levels. There seems to be no doubt that the industries of the nation will be able to produce the goods to absorb this increased national income and that a balance should be obtained that will stop inflation to a very large extent. If such a state of conditions obtain the post-war era, all industries should operate at high dollar levels of volume and this industry should be no exception.

The Drug Industry's

More Intensive Merchandising by Chains and Independents, Greater Retail Interest in the Rapidly Increasing New Therapeutic Agents, and Intensive Research and Development of Manufacturers with Greatly Augmented Detail Staffs Appear to be Certain Developments

THE cooperation which develops between all factions of a country during time of national danger is something that immediately disappears once the danger has passed. This cooperation goes all down the line and affects all branches of all industries. In the present conflict, one of the outstanding examples of this cooperation has been in the production of badly needed drugs such as penicillin, atabrine, and some others. All other considerations were thrown to the wind in an effort to supply for the successful prosecution of the war effort those things that were so badly needed. The members of the medical profession which were in the Armed Forces did great work in using these new products and determining their uses and limitations. These doctors were always willing and anxious to try something new in the hope that it would relieve the great suffering with which they were faced and get the men back to health if not back to action at the front.

But when the war is ended and the need for cooperation to defeat a dangerous enemy no longer brings about this close fellowship born of danger, the factions with their own selfish interests will again be pitted against those whom they opposed before the emergency arose. Competition within the drug manufacturing industry will become extremely sharp and the medical profession will not be so ready to try out the new products brought to their attention by the detail men of the manufacturing houses. Wholesalers and retailers, who have been willing to accept the rationing programs of the manufacturers in good spirit will again open their mouths and holler loud about the lack of discounts and cooperation on the part of the manufacturers and about the terrific duplication of products of various manufacturers that they must carry in stock.

The retailers of the country have not as yet begun to feel the pinch of the competition that they will feel when the war is over and national income declines sharply at least for a while. The retail druggists will not only feel competition from one another more sharply than at the present time, but they will feel it from the new retail establishments that are springing up throughout the country and that will spread further when materials become more available. It seems that the retail druggist no longer holds a monopoly on being the modern general stores stocking anything that is popular at the moment whether or not it is related to the drug business. We find large chain retail establishments opening stores with the wierdest assortment of merchandise that can one imagine. The Sears Roebuck stores and the Montgomery Ward stores are expected to have wide assortments of merchandise since their mail order business—from which they sprang—supplied just about everything that anyone could want. But now we find Firestone stores in which one is greeted by a large rubber tire, but then sees such things as bridge chairs, toys, sport shirts and pants and lord knows how many other totally unrelated things. The theory of a drug store handling a wide variety of merchandise is that when people go in to buy drugs or cosmetics—which most everyone does at one time or another—or when people go in to get a soda or a sandwich, they will see things that they were thinking of buying and make an additional purchase. However, we do not get the connection between a drug store with rather heavy store traffic, and a rubber tire store which normally would have very light store traffic.

Naturally when the variety of merchandise available includes all sorts of things that are unavailable at the present time, these stores will be able to increase the traffic in their stores. Electric refrigerators, toasters, washing machines, vacuum cleaners, and similar things will soon be available and perhaps these newer stores are anticipating the return of this type of merchandise and getting their stores located now so they will be ready when the turn comes. But similarly, the retail druggists must prepare for the return of peace with its availability of merchandise. He must be ready to stock those things which he stocked before the war and he must be ready to add the newer merchandise as it becomes available.

Post-War Program

Many are of the opinion that the retail druggists will lean more toward the professional type of store, and for this reason they will largely abandon much of the merchandise that is unrelated to drugs and cosmetics and that many of them will abandon the soda fountain business. But if the plans of the chain stores are any criterion, the reverse will be true since the chains are planning more of the large "block-long" stores with all various departments carrying different types of products. Also one will doubtless find in the post-war era the same large type of chain and independent stores in busy small towns selling everything imaginable and doing the great bulk of the drug store business of the town. It is true that professional drug stores can prosper in cities where the volume of business is great enough, but they always have had, and will continue to have a tough time existing in the smaller communities where drug stores are largely built up through their soda fountain and restaurant business and through the merchandise that they carry which is quite unrelated to the drug business.

Furthermore, the chains—who are anticipating fewer stores but much larger stores—are going to attempt to cover the same amount of territory that they covered before through an extension of the agency system to more independent retail drug stores. And it is well known that the minds of the chain stores are geared to sell everything and anything that can be bought cheaply and sold at a profit. So if the chains are successful in extending their agency systems to an increased number of stores, then the number of stores carrying a wide assortment of merchandise will increase rather than decrease. This will probably result in a smaller percentage of professional stores.

On the other hand, some manufacturers are of the opinion that because of the tremendous changes that have taken place in therapeutics, the professional aspect of the drug store must improve despite all other considerations. The newer drugs that can be sold only on prescription and the greater restrictions on other drugs in their sales over-the-counter call for more strict attention to the drug department of the drug store. Also the sale of vitamin preparations and the coming amino acids necessitate a type of person in the drug store that pays close attention to the drug products that he handles. This will place an increased responsibility on the manufacturer in the detailing of the retail druggists. Detail staffs will have to be increased very materially by manufacturers, and the members of the detail staffs will have to be more highly educated to their jobs than in the prewar period.

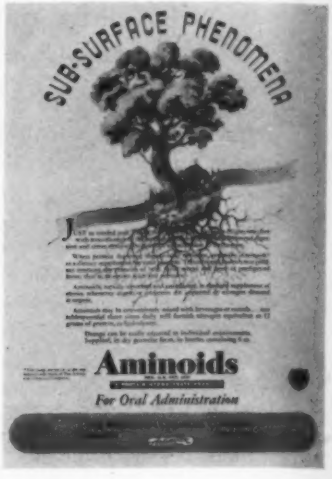
This is why some manufacturers are taking steps to almost double the number of men detailing doctors and druggists once manpower becomes available. At the moment, the drug manufacturers do not have the men and the doctors and druggists do not have the time to give to very many detail men. But all this will change when manpower again becomes free. When the doctors now in the Armed Forces return to civilian life they will be quite well versed in the art of using the newer products since they will have learned of them while in service. It will then be essential that the doctors who were not in the service learn of the use of these products through detail men and in other ways. These civilian doctors who have been so rushed during the war that they have little or no time to read or to attend lectures, will have to take time out for this when they are relieved of the great pressure by the return of other doctors to their communities.

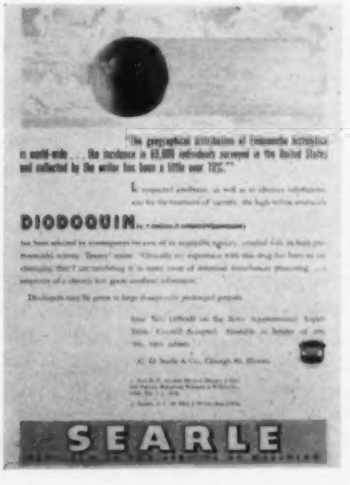
The drug business promises to become a more rapid moving business than ever before. By this we mean that the turnover in the types of products in use is going to increase greatly. This is clearly forecast by the greatly augmented research staffs of the leading pharmaceutical houses and close association that these houses have with the hospitals and clinics of the country in getting their discoveries applied directly in large numbers of cases. We shall doubtless see the greatest period of research and development in therapeutics in the years that lie just ahead of us and this development will result almost solely from the efforts of the pharmaceutical manufacturers. The medical profession will cooperate in the picture as they have in the past, but the ideas and push behind these developments will be the product of the pharmaceutical houses.

Such an effort is essential if this country is to take the lead in therapeutic research and development—a lead that for a long number of years was held by Germany. It is clearly up to this country to produce products that will cure or control those diseases that cannot now be cured or controlled. As these products are developed they must be stocked in the drug stores of the country and handled there by men who have the proper knowledge regarding them.

Trends in pharmaceutical advertising

By HARRY C. PHIBBS





If you ask the average sales or detail man—"Does the doctor read advertising?"—he will tell you "No!" His story is: "the doctor doesn't take the mailing covers off the magazines and he throws all direct mail in the waste-paper basket." The detail man is what one might call a prejudiced witness. He wants to promote the idea that the only way to sell the doctor is by personal contact. I have always felt that this personal contact is perfect in its place, but does not represent the whole story of pharmaceutical selling. The war has given us a chance to prove our ideas as to the advantages of advertising to the medical profession.

The call to military service played hob with a lot of sales and detail forces. There were many changes and many territories left without sales coverage for a considerable portion of time. Here was the chance to prove what advertising could do and most of the firms in the industry took advantage of it. The fact that sales in general have not only held up but have shown remarkable increases is a tribute to the increased use of direct-mail and journal advertising. Advertising has more than adequately replaced many a manufacturer's losses in sales and detail personnel.

Investigating the claim that the doctors don't read advertising in medical journals, you come across some interesting and amusing phases. I know some doctors who will not admit that they read the advertising in the medical journals. When I asked a few doctors where they got their information for a product that is being rather largely prescribed, they told me they got it from the editorial pages and scientific articles in medical journals. Because I knew there was no way they could have obtained that information from a scientific article, since none had appeared on that particular product, I knew they had been reading the ads.

Any investigation of the quality of a doctor will show that the man who is a good doctor—advancing in his profession and enjoying a good practice—is invariably a reader. He has to read to keep up with the advances of medicine. If he tells you that he doesn't read the ads, he is just putting on an act.

Also amusing is the doctor who claims that he throws all direct mail into his waste-paper basket. Surveys among the medical profession show that this is certainly incorrect. A large percentage of doctors read all their mail that looks as though it were worth reading.

I have in mind one particular man—a top-notch specialist. He boasts that a detail man can't get in to see him and he loudly asserts that he throws all direct-mail into his waste-paper basket. But, recently I was talking to him in his office and asked him about dosage and indications for a certain new product. "Wait now," he said, "I read something about that this morning." He reached into his waste-paper basket and pulled out a circular on this product. "Here's your information," he said. "Yes, I replied, "but you read it before you put it there."

During the war the number of doctors who have been taken in the service has thrown a tremendous burden on the doctors who have to take care of the civilians. Their offices are jammed and their hours crowded. Even the most enthusiastic detail man will tell you that it's hard to get interviews these days. So the advertising, both by direct-mail and in medical journals, has had to carry the pharmaceutical mesasge to the busy doctor.

There are some significant trends in the type of advertising that has developed during this hectic period. The smart people have put their emphasis on fine artwork; they have used good printing and plenty of color, in fact, the quality of direct-mail going to the doctor today is about the finest, from the standpoint of typography, art, scientific illustration, etc., being put through the United States' post offices.

If you have been watching the mail put out by the leading pharmaceutical houses, you have seen that they run largely to art and illustrations. Even "art for art's sake" has been used on an unprecedented scale.

Art has a particular appeal to the doctor. In the first place, he is an artist himself. Medicine is an art and a considerable percentage of doctors are amateur artists in their own way. They use a camera, water colors, or an etching needle as a recreation. They are interested in and appreciate art. The significance of this trend in pharmaceutical advertising is proven by the fact that the President of the United States, in person, recently received a present of some paintings made by a pharmaceutical house.

One of my clients makes a special hobby of getting out an artistic picture on the front cover of his advertising, and doctors by the thousands invariably write in for extra copies.

These days, art is very expensive because, like any another profession, artists are making hay while the sun shines. But, in direct-mail the cost of art and fine typography comprise only a small part of the over-all cost of a worthy piece of advertising. Paper, printing, mailing services and postage are the costly items.

A matter which has projected itself prominently into war-time pharmaceutical advertising is the importance of the trade-mark name. In order to reap the benefits of his promotional efforts, the manufacturer has to have a trade-mark name to protect his interests.

In a recent paper on hospital pharmacy a plea was made to simplify matters for the pharmacists by cutting down the number of similar products shown under different trade-marks. This is almost an approach to that thing in pharmacy which we are fighting in medicine—socialization. In other words, trying to tell the doctor he should write the prescription so that the pharmacist could decide which pharmaceutical house's product would be best for the patient. After all, this is a matter for the doctor to decide. The product may be U.S.P. or N.N.R. but the doctor may have in mind the fact that a certain house has done certain favors for him and he wants to use their products. He may like this particular product better than the product of any other house. The only way the manufacturer can assure the doctor that the product he desires will be dispensed on his prescriptions is to have a trade-mark.

(*Continued on page 271*)

Review of New Law Suits

By LEO T. PARKER

MANUFACTURERS of drugs and cosmetics waste a great deal of time, effort, expense, and inconvenience in defending unnecessary law suits. This is readily apparent, from reading the cause and outcome of recent law suits. Many of these legal controversies may have been easily avoided had the litigants been familiar with the modern law. In other instances, of course, knowledge of the prior higher court decisions may have assisted readers to win unavoidable suits.

Trade-Name Held Misleading

Modern higher courts consistently hold that all trade-marks, trade-names, and slogans are invalid and unlawful which mislead or deceive the buying public.

For illustration, in Howe v. Federal Trade Commission, 148 Fed. (2d) 561, reported July, 1945, it was shown that a corporation's place of business is in Seattle, Washington. It is engaged in the sale and distribution of cosmetic preparations. For the purpose of inducing the purchase of the cosmetics, the company used the trade-mark "Hollywood" and the legend "Favorite of the Stars."

A suit was filed against the company by the Federal Trade Commission. During the trial testimony was given that the company manufactured and sold some twenty items but only three of its items are obtained from sources in Hollywood. Also, the testimony showed that the company's preparations were not recognized by the Hollywood actresses as being of superior quality.

In view of this testimony the Commission held that use of the word "Hollywood" was deceptive and misleading, and concluded such deception to constitute unfair practice within the meaning of the Federal Trade Commission Act. The Commission issued an order to cease and desist from using the word "Hollywood" to designate any product which is not in fact manufactured in Hollywood, California, or using the words, "Favorite of the Stars." The company appealed to the higher court which approved the verdict and said:

"A substantial portion of the purchasing public and persons in the cosmetic trade associated the label with the motion picture colony and thought the cosmetics were manufactured there. There was also evidence that a Hollywood origin in a cosmetic product was a business asset. The evidence showed also that the preparations in question were not recognized by the actresses of Hollywood as being of superior quality."

However, this court held that the company could legally continue use of the trade-mark "Hollywood" if it inserted after the words "Hollywood, California" the parenthetical sentence: (The term "Hollywood, California," as used herein, means the entire city of Los Angeles, California, and those adjacent or contiguous independent municipalities which are generally regarded as comprising the Los Angeles metropolitan area, such as Culver City, Beverly Hills, Glendale and Santa Monica.). The court said that this explanation would indicate to purchasers that the products were not "Hollywood" products. However, the higher court refused to allow the company to continue use of the words "Favorite of the Stars."

Also, see the case of Stanley Laboratories, Inc., v. Federal Trade Commission, 138 F. (2d) 388. This court found that the use of the words "M.D." in marketing a douche was a deception attempting to capitalize on the prestige of the medical profession.

Trade-Mark Denied

When a person or company selects a new trade-mark it must select a mark *not* similar to an old and well-known trade-mark. Generally speaking, when a person selects a trade-mark somewhat similar to an old mark, the court may decide without much testimony that such similarity was intended to confuse the public and ultimately obtain business or sales rightfully belonging to the owner of the old trade-mark.

For example, in Hoffmann-LaRoche, Inc., v. Kawerk, 148 Fed. (2d) 557, reported April, 1945, the Court of Customs and Patent Appeals, had occasion to decide the breadth and validity of a registered trade-mark "Roche" which has been used for many years on a large variety of preparations including those for treatment of colds. Also, the mark has been used over a period of nearly fifty years for a "constantly varying and ever-increasing line of medicinal and pharmaceutical preparations," including preparations having antiseptic qualities.

A man named Kawerk applied for registration of his trade-mark "Rox." This new trade-mark is used on a salve for treatment of head and chest colds, nasal congestion, and also as an antiseptic dressing for minor cuts or insect bites.

The court held the old trade-mark "Roche" valid and, also, refused to register Kawerk's new trade-mark, and said:

"It would be logical to conclude that appellee (Kawerk), when he adopted his mark, ... knew of the

favorable repute of appellant's (old firm) identical product, sold under the 'Roche' mark. Under such circumstances it was incumbent upon him to select, from the vast field of trade-mark possibilities, a term that would indicate origin of the goods in him and one which would not be likely to bring about the result Congress, in the enactment of the said Trade-Mark Act, sought to avoid. Failing to do so, the law requires that registration be denied."

Still another important point of law is that a court may restrain a person from using *his own name* to prevent confusion of the buying public where there is bad faith.

For illustration, in the leading case of Vick Medicine Company v. Vick Chemical, 5 Cir., 11 F. (2d) 33, it was disclosed that a man named "Vick" established a business and began to manufacture and sell his product in competition to Vick Chemical Company. The testimony indicated that the new user intended to benefit from the publicity and advertising of the latter company on its "Vicks Vapor Rub."

It is important to know that the higher court directed that the new Mr. Vick *stop using his own name* in the manufacture and sale of any and all products similar to "Vicks Vapor Rub."

Local Freight Rate Lowest

According to a decision rendered by a late higher court the legal freight rate is the highest through rate, although a lower local rate is available.

For example, in T. & M. Transp. Company v. S. W. Shattuck Chemical Company, 148 Fed. (2d) 777, reported June, 1945, it was shown that the established freight rate is 85 cents per cwt. from Denver to Chicago and 99 cents per cwt. from Chicago to New York. Eighty-five cents per cwt. Denver to Chicago plus 99 cents per cwt. Chicago to New York equals $1.84 per cwt. The established *through* rate for the route over which the merchandise actually moved, T. & M. Transportation-Midwest Freight Forwarding, was $2.17 per cwt.

A company shipped from Denver to New York thirty-five separate shipments of vanadic acid. The shipper refused to pay the through rate of $2.17 per cwt., and the motor carrier sued to recover freight charges on that basis.

It is interesting to observe that the higher court held that the lawful rate is the highest rate of $2.17 per cwt.

On the other hand, this court held that if an interstate motor carrier promised to select the cheapest available rate and failed to do so, the carrier is liable to the shipper for the difference between the rate charged and the cheapest available rate.

Courts Differ on Excise Tax

Considerable discussion has arisen from time to time over the legal question: In computing costs of cosmetics for excise tax purposes may the manufacturer include such expenses as advertising and selling?

The answer to this legal question depends upon whether the taxes were collectable before or after June, 1939, and where the manufacturer is located.

For example, in United States v. F. W. Fitch Company, 141 Fed. Rep. (2d) 380, reported June, 1944, the Circuit Court of Appeals, Eighth Circuit, had occasion to interpret Section 603 of the Revenue Act of 1932 which imposes an excise tax upon toilet preparations sold by manufacturers, producers and importers. This law provides (Sec. 619 a) that manufacturers may deduct costs of transportation, delivery, insurance, installation, "or other charge" in determining the sale price for the purpose of the tax during the tax period October 1, 1936, to and including the month of June, 1939. A company filed a claim for a refund of $67,666.39 based upon its failure to deduct "such expenses" in determining prices. In fact this particular company, which manufactures and sells toilet preparations, in computing prices in its monthly excise tax returns made *no* deductions for its advertising or selling expenses. The counsel for the company argued that the words "or other charge" found in this 1932 law means that "all" nonmanufacturing costs may be excluded in determining the selling prices of manufactured toilet preparations the purposes of the excise tax.

The Circuit Court of Appeals, Eighth Circuit, refused to agree with this contention, and said:

"It seems clear to us that the words 'or other charge' must be taken and understood to mean 'or other like charge.' We do not regard the expense of advertising and selling an article as being substantially similar to a charge for the transportation, delivery, insurance, or installation of the article sold."

On the other hand, see the late decision of the Circuit Court of Appeals of the Seventh Circuit in Campana Corporation v. Harrison, 7 Cir., 114 F. (2d) 400. In this case the court held that manufacturers may deduct advertising and selling expenses, under a new and later law.

An amendment to the Revenue Act enacted June 29, 1939 provides that, in determining the selling price of articles subject to the manufacturers' excise tax on toilet preparations, there may be excluded "a transportation, delivery, insurance, or other charge, and the wholesaler's salesmen's commissions and costs and expenses of advertising and selling."

Similar Trade-Marks

When deciding whether one trade-mark infringes another, the important consideration for the court is: Will the new trade-mark confuse the public and enable the new user to profit by publicity of the first user? If so, infringement exists, otherwise the new mark does not infringe the old mark.

For example, in Goldsmith Bros. v. Atlas Supply Company, 148 Fed. (2d) 1016, reported June, 1945, it was shown that a manufacturer named Goldsmith registered a trade-mark "Goldex" for use on chemicals,

(*Continued on page 271*)

EUROPEAN

AMINO ACIDS

By M. A. LESSER

The first mass trial of the amino acids in nutritional rehabilitation is now going on in Nazi-ravaged Europe.

ECLIPSED for many years by the emphasis upon the vitamins, the amino acids are once again coming into the light of widespread scientific consideration and therapeutic application. During the one hundred and twenty-five years since the first amino acid was discovered, much has been learned concerning these "building blocks" of the proteins. The last fifteen years has been especially fruitful in providing more specific information concerning these nutritional requisites.

Next to water, protein is the most important component of the soft living tissue. Protein must always be supplied in foods to provide the materials necessary for reparative processes and for building new tissue. However, as is pointed out by Jones,[1] the question of protein requirement in nutrition is essentially a matter of amino acid requirements. This is aptly emphasized in Rose's[2] remark that, "One of the most astounding attributes of living things is the unerring accuracy with which specific tissue components are manufactured out of the variable mixtures of amino acids circulating in the blood."

The function of the amino acids in supplying tissue-building and replacement materials is not their sole function in the body. It is now quite generally recognized that many enzymes and hormones are protein material, or contain amino acid residues as essential parts of their structure. These substances do not enter directly into tissue formation, but provide specific effects essential in the physiological regulation of the body. Where there is a deficiency of amino acids in ingested proteins, it is quite probable that the elaboration of enzymes and hormones would proceed at the expense of the break-down of tissue proteins to meet the demand.[1]

In discussing amino acids, bio-chemists and nutritionists generally refer to them as "essential" or "non-essential." Those amino acids that the body cannot manufacture, but which must be supplied from external sources are called essential or nutritionally indispensable, while those which can be synthesized within the body are classed as non-essential or nutritionally dispensable. As explained by Dixon,[3] the essential amino acids, in common with the vitamins, are those which cannot be synthesized in the animal body and therefore must be supplied in the diet. The harmful effects of amino acid deficiency are slower in developing than those of the vitamins and are somewhat less

pronounced, because of the storage of such amino acids in the body proteins. He points out that essential amino acids vary in their biological functions, some being utilized for the formation of proteins, others as precussors of endocrine secretions, some to control the speed of metabolism, and some to stimulate growth.

Of the twenty-two known amino, ten are generally considered to be essential. The following table, resulting from Rose's[4] investigations, provides a classification of the amino acids with respect to their indispensability as dietary factors; using the growth response of laboratory animals as the ultimate criterion of their essential nature.

Classification of the Amino Acids

Essential	Non-Essential
Lysine	Glycine
Tryptophane	Alanine
Histidine	Serine
Phenylalanine	Norleucine
Leucine	Aspartic acid
Isoleucine	Glutamic acid
Threonine	Hydroxyglutamic acid
Methionine	Proline
Valine	Hydroxyproline
Arginine	Citrulline
	Tyrosine
	Cystine

Because observations obtained from animal studies cannot always be interpreted in human terms, Rose and his associates[5] undertook a series of very indicative studies on human subjects. As a result of these investigations on normal young adults, it was found that human subjects can be maintained in a positive nitrogen balance on synthetic diets containing only eight of the ten amino acids which had previously been found essential for the rat. The two amino acids dropped from the human list are arginine and histidine.

Still to be determined are the quantities of each essential amino acid needed to meet the total protein requirements. Some indicative work along these lines has already been done by Melnick and Cowgill,[6] and further investigations are under way.

Far from being academic, present medical interest in amino acid preparations arises from a growing appreciation of the causes and results of protein deficiencies. Such deficiencies may arise from a number of causes. Since protein-rich foods are comparatively expensive, cost may prevent some groups from obtaining suitable quantities of essential amino acids. War and famine leave their marks on protein supplies. Prescribed or voluntary dietary restrictions may play a part in some cases. Inability to masticate, a frequent complaint of older folks, is another factor that is becoming more important. Digestive derangements, peptic ulcer, persistent vomiting are among the conditions that may interfere with the normal digestion and assimilation of proteins.[7]

Failure to take into account increased protein demands during pregnancy, growth and hypermetabolic states, like hyperthyroidism, leukemia and fever, may also be responsible for amino acid deficiency. Increased protein losses follow hemorrhage, proteinuria, burns, pus-forming infections and similar conditions unless amino acid supplies to the body are maintained at adequate levels.

Readily apparent in the extreme conditions that result from mass starvation following war and famine, protein depletion is a serious complication, which because of its insidious development, frequently goes unrecognized until it reaches an advanced and often dangerous state.[8] A number of clinical conditions associated with such depletions are now recognized. Among these might be mentioned nutritional edema, anemia, complications of pregnancy, lowered resistance to infection and intoxication, and impaired healing of wounds.

Appreciation of these facts, plus evidence that the administration of amino acids could enable the body to meet its nitrogen needs,[9] encouraged the development of suitable products. Since amino acids are equivalent to digested protein, it was evident that preparations containing adequate quantities of all the essential amino acids could satisfactorily replace the actual eating of proteins and that the body should be able to use such materials for physiological processes requiring proteins or protein derivatives. Today amino acid preparations meeting the requisites of both oral and parenteral administration are available to prevent or combat protein depletion or amino acid deficiency.

Ideally, the protein requirements would be met most efficiently, by administering pure, crystalline amino acids in correct proportions.[10] That such a possibility exists has been demonstrated not only by Rose's[4, 5] studies, but by other laboratory[11] and clinical investigation[12] as well. However, as remarked by Elman,[13] while pure crystalline amino acids in appropriate mixtures are available and offer many advantages, the cost of such preparations is still so great as to make them prohibitive for general use.

The factor of cost is being tackled by chemists who are constantly devising new and improved methods for separating and synthesizing amino acids. One need only glance through the recent technical literature to realize the amount of work being done on this phase of the problem.[13, 16]

The more economical and more widely employed approach to the problem of providing effective amino acids involves the hydrolysis of relatively pure, cheap and complete proteins to their constituent amino acids and removal of the hydrolytic agents to render the mixture nontoxic. Essentially there are three methods by which proteins may be hydrolyzed to amino acids. These include enzymic digestion, acid hydrolysis and alkali hydrolysis, but in actual practice only the first two are important.[17] Each method has its advantages and disadvantages. Pancreatic digests, for example,

(*Continued on page 264*)

Essential Oils from Middle America

Lemon grass is now grown in Honduras and Guatemala

THE United States now requires more than 3,000 tons per year of essential oils distilled from tropical grasses which until recently were grown and processed almost entirely in Java, Ceylon, Malaya, Madagascar, India and other Eastern tropical areas. These oils include citronella, lemon grass and vetivert, which oils are the staple sources of many important aromatics, such as geraniol, citronellol esters, synthetic menthols and various other ingredients or starting materials.

For many years tropical agriculturists have known that these valuable oil grasses can be grown in the American tropics, particularly in the lowlands or medium altitude areas of Central America, northern South America and the Caribbean islands. Before Pearl Harbor a few profitable grass oil plantations had been developed in neighbor nations, particularly in Guatemala and Brazil. But for several reasons the developments were limited. United States' needs for large quantities of grass oils are comparatively recent. Since World War I the industry has grown from comparatively casual to really notable. Until Pearl Harbor the production and distillation of oil grasses were primarily coolie labor enterprises with which the American tropics showed no real eagerness to compete. Particularly in India, Ceylon and Madagascar, desperately poor people, eager for the chance to earn a few pennies a day, harvested the wild grasses with hand sickles or knives, distilled the oil in crude home-built mud vats, then sold the poorly graded and badly polluted oils to native buyers for a few cents per gallon.

Only in Java was the agriculture of oil grasses well developed. As early as 1899, with the help of the Netherlands Government, citronella grass imported from Ceylon was planted in this richest and most populous of the Netherlands Indies. By 1934 Java alone was producing around 1800 tons of citronella oils per year as compared with 600 tons for all of Ceylon, original home of the crop. At the time of Pearl Harbor, Java had about 50,000 acres of citronella grass in bearing and about 100 commercial distilleries plus about 80 comparatively primitive home distilleries, practically all of them in western areas of the island.

The Dutch leadership of Java had established the accepted routine for processing grass oils. The grass is mowed like hay and left to dry in the sun from a few hours to two or three days, depending on the local climate and grass condition. Before distillation the grass is commonly chopped to pieces with a mechanical ensillage cutter. Sometimes the stills are fired with "spent" grass or bagasse supplemented with wood. Direct fire stills and steam kettle stills were most commonly used to extract the valuable oils.

As a rule the small growers in the Far East tropics distilled the oils in clay vats imbedded in stone hearths provided with a grid on which bundles of the grass were stacked. They heated the water beneath the grid with direct fire and stowed or tramped the grass into the still from a top manhole and discharged the bagasse from a side vent. During firing, the crude condensation liquids were collected in jugs which were placed at the bottom of the still's "crater."

But there is a distinct challenge for improved distillation technique. The steam must rise through the packed grass with sufficient force to penetrate the grass load evenly. Uniform temperature and pressure must be maintained throughout the distillation period, which averages three or four hours. Efficient transport and handling are imperative because oil recoveries average

Processing mill for lemon grass and citronella at La Lima, Honduras. Photos courtesy of Middle America Information Bureau

only one-half to one per cent of the weight of the cured grass. More recently large farming companies in the Netherlands Indies developed "battery" stills in which the steam is generated in a central boiler fueled with wood or spent grass. The chopped grass is placed in batteries of giant kettles each holding from 1,000 to 2,000 pounds. The kettles rest on revolving platforms, discharge the extracted oils into filter jugs and dump their contents of spent grass into ctach cars when the operator pulls a lever or turns a spillage wheel.

After Pearl Harbor and Japan's spectacular loot of the Far East tropics it was obvious that if the United States got any more essential oils, these would have to be grown and distilled in the American tropics. The net result is that Yankee ingenuity has joined hands with Central American farming skill to supply at least part of the essential oils which the United States must have.

The United Fruit Company has taken the lead in introducing essential oil grasses into the American trpoics; the U. S. Sugar Corporation with an estimated 1800 acres of lemon grass already planted in the Clewiston area of Florida has indicated the possibilities for growing lemon grass in the United States. The story of these introductions is a repetition of the time-tested adage of necessity being mother of invention. In June, 1941, United Fruit agriculturists succeeded in importing into lowland Honduras some 65 "mats" of citronella or sereh grass and divided these into 596 new plants. By October, 1941, this first handful was increased to half an acre of seed plantings. At present the plantings in the area of La Lima, Honduras, cover about 200 acres. It is a good start. The same company has recently instituted the planting of a few acres of vetivert—the best Java strains of another tropical grass whose roots produce oil essence for fine perfumes.

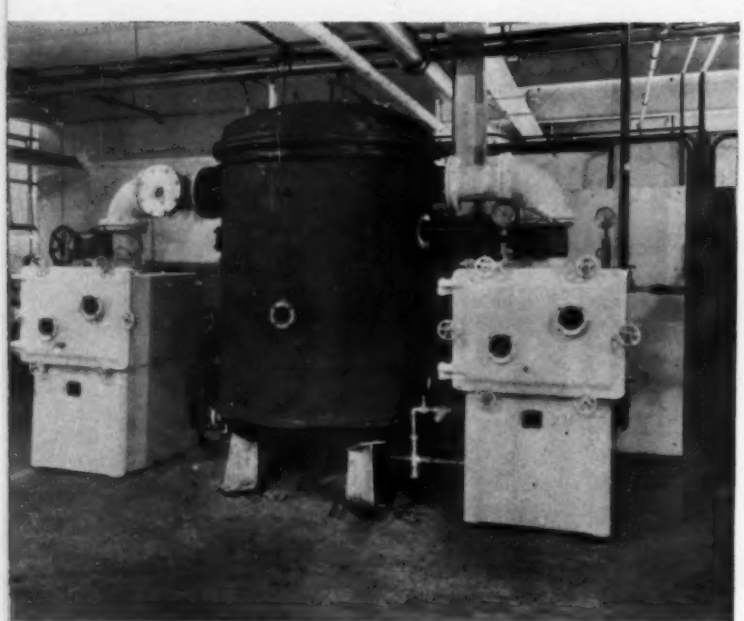
The story of lemon grass is similar. From a first tiny planting begun at La Lima, Honduras, in 1939 a seed bed of one and one-half acres was developed. By 1942 this provided planting stock sufficient for 35 acres—in furrows 18 inches apart. Experimental harvests yielded about 13 tons of green grass per acre yearly. Early in 1942 the planting was expanded to 135 acres, then to about 200, and so on.

Tests in distillation showed first recoveries of about

(Continued on page 269)

Drying by Sublimation

By EARL W. FLOSDORF*



A plant for plasma and penicillin drying. Courtesy of F. J. Stokes Machine Company.

DURING the last several years, much progress has been made in the process and the equipment used for drying by sublimation. In this process, the product is first frozen. Then under high vacuum, the ice is sublimed; that is, the ice evaporates without melting. The solids which were contained in the original material are left in shape much like the original frozen product and there is little over-all reduction in volume occupied.

Drying by the process avoids danger of destroying the desired therapeutic properties of serum, blood plasma, penicillin and other biological products. In addition, many chemicals and pharmaceuticals are dried this way in order to improve the rate of solubility. Considerable research has been carried out in sublimation drying of a variety of commercial materials, including fruit juices, milk, fish and meat and now the process and equipment have been stream-lined to the point that such products may soon appear on the market.

*Director Research and Development, F. J. Stokes Machine Company, and Assistant Professor of Bacteriology, School of Medicine, University of Pennsylvania.

Objectives of Sublimation

There are a number of objectives in drying while frozen, all of which give the method valuable applications and uses. First, the temperature is below that at which many labile substances undergo chemical change. This applies to labile components in blood, to viruses and most forms of micro-organisms and to other biologicals and pharmaceuticals. Second, because of the low temperature, the loss of volatile constituents is minimal. This is particularly important in application to many foods like orange juice and pineapple juice. Third, since the product is frozen, there is no bubbling or foaming, which, in the case of drying some substances, would result in changes due to surface-action such as the surface denaturation of proteins which occurs in drying their solutions even at low liquid-temperatures under vacuum.

Fourth, the solute remains evenly dispersed and distributed without undergoing concentration, as frozen solvent sublimes, and the remaining dry residue emerges as a highly porous solid framework. It occupies essentially the same total space as the original solution did and the final residue is not the fine powder with which the chemist is mostly familiar. It consists of a friable interlocking and sponge-like structure. As a result, solubility is extremely rapid and complete. For example, gelatine dried from a solution which had to be prepared in the first place by boiling becomes instantly soluble in cold water. Fifth, since the molecules of solute are virtually "locked" in position in this way, the tendency for coagulation of even lyophobic sols is minimal. Even though the lipoidal constituents of dry blood plasma do not reconstitute perfectly after drying and do produce a slight degree of turbidity, there is far from complete coalescence. The particles are small enough to be safe for intravenous injection and do not cause capillary embolism.

Sixth, during drying, the surface of the evaporating frozen ice layer gradually recedes to leave more and more of the highly porous residue of solute exposed. As a result, "case-hardening" never occurs. A far lower content of moisture may be obtained in the final product without use of excessively high final temperature. For this reason of lower moisture content, a

greater degree of stability results than is the case after any other method of drying.

Seventh, bacteriological growth and enzymatic changes cannot take place under the frozen conditions of drying. This is important for foods as well as medical products used in parenteral injection. The final fully dried product likewise resists bacterial growth and enzymatic action. Eighth, because of the high vacuum used, in contrast with the degree of vacuum used in ordinary low temperature liquid evaporation, the amount of oxygen present is so extremely small that even the most readily oxidizable constituents are protected.

It is for these reasons that a method which only ten years ago was developed from a laboratory curiosity into a workable procedure has become a major used process for drying in the biological and pharmaceutical industry. The detailed history of the development has been recorded with full bibliography given.[1, 2] Long ago, substances were dried while in an ice-box and early this century this procedure was combined with the placing of the products in a vacuum chamber to be dried. However, it has been only within the last ten or fifteen years that it has been recognized that by establishing proper conditions of vacuum for removal of water-vapor and by rapid application of heat to the frozen product, rather than keeping it in an ice-box, this process could be made industrially workable and with improved products resulting. The final dried product is raised to a temperature well above 0°C. and often as high as 60° or 70° C., in order to reduce the final content of moisture to a minimum.

Two Stages of Drying

There are two stages in drying by sublimation. In the first, ice is evaporated from a frozen mass. In the second, moisture is removed from the final dry solid to lower the residual content to a minimal level. During the first stage, depending on the particular product, some 98 to 99% of all water is removed. In the second, the residual moisture content is reduced to 0.5% of the final product or less, which represents final removal of 99.95% of the original content of water (assuming 10% solids originally). In the first stage, temperatures are well below 0° C. Upon gradual passing from the first stage to the second, the temperature rises and finally reaches that of the room or higher depending upon whatever final ambient temperature is used.

Removal of Water Vapor Under High Vacuum

The most important consideration in the type of procedure and equipment to be used in desiccation is the means for removal of the water vapor from the rapidly evaporating material under high vacuum. Three general means have been used for this. Each of the methods possesses advantages. The one which is to be chosen in a given case depends upon various conditions, among others, the scale of operation.

(1) *Condensation* of the water-vapor may be carried out in condensers refrigerated either with dry-ice or mechanically as with Freon or ammonia.

(2) *Desiccating substances*: Regenerable desiccants introduced in 1938 have much in their favor under certain circumstances. This usually applies to small volume production and in general research work.

(3) *Direct Pumping* of the water-vapor provides one of the simplest commercial procedures. This may be carried out either by means of an ejector pump or an oil-sealed rotary pump. In the latter case, the pump must be equipped with means for continuously removing water from the oil of the vacuum pump, as by a centrifugal clarifier.

Containers for Medical Products

Foods of necessity must be dried in bulk. Medical products, however, are generally dried in the final containers used for market distribution. Even though the cost of drying this way is higher, wherever the products are used for parenteral injection, this procedure is a safer one. The reason is that representative bacteriological sampling can be carried out more accurately with liquids than with solids. Accordingly, with the final containers filled with liquid and sampled for test before freezing and drying, there is greater certainty that all containers are sterile than if dried product has been weighed and distributed to the final containers before sampling.

Bulk Drying

For many purposes, it is desirable not to dry in the final ampul. This is the case in carrying out desiccation of products as part of a general processing in which the final product is not stored or distributed in dry form, such as is the case with serum albumin. Similarly, labile substances may be concentrated for other purposes in this fashion. Either special stainless steel sterility pans with lids designed to keep out microorganisms, or large glass or metal bottles, may be used. Bottles may be placed either on a manifold or within heated vacuum chambers.

Rapid Drying Cycles

It is self-evident that water-vapor must be carried off rapidly in order to have rapid drying. By use of modern means, this is readily accomplished. An adequate condenser with proper surface temperature of the ice, or a steam ejector designed for proper pressures, in either case having sufficient capacity in relation to the volume of products to be dried, can be specified on the basis of as favorable a ratio as can be desired; and so, on the basis of removal of water-vapor *per se*, there is no physical limitation with regard to speed of drying. The controlling factor then becomes one of rate of supply of heat for producing rapid evaporation; otherwise, the vapor pressure of the frozen product is not maintained at the optimal point.

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ALUMINA

still poses problems in glassmaking

FOR centuries glassmakers regarded alumina as an undesirable "impurity" and tried to keep it out of their batches. Then, one day careful analysis disclosed a startling fact. It was discovered that alumina, occurring as an undetected impurity in German sand, gave Thuringian glass its world-wide reputation for superior quality.

Today, as a result, alumina is almost universally used to increase the chemical durability of glass. But it still poses knotty problems for the glassmaker. If he adds too much alumina, it makes the batch harder to melt and the glass harder to form. And alumina is not added in the pure state, but as a component of feldspar, which contains, in addition to the alumina, varying amounts of five other glassmaking ingredients!

So even after the glassmaker has carefully balanced his composition, he still has to make corrections in his batch based on the chemical analysis of the feldspar to allow for the other ingredients the feldspar adds.

To this and other similar problems in glassmaking, Armstrong's glassmakers bring long years of experience and research. Their knowledge, applied with a rigid regard for the highest standards, helps explain Armstrong's continuing reputation for producing top-quality glass.

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ARMSTRONG'S GLASS

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Packaging and Selling

A 40 Million Market

With a retail sales total of $800,000,000 in the offing somewhere between the end of the current year and the middle of 1946 and a calculable annual volume of one billion dollars in sight by the end of the present decade, cosmetic manufacturers have plenty of encouragement for the future. High, as these figures may sound, they are not quite as unattainable as they appear when it is considered that cosmetic sales have grown during the last five years at the rate of one hundred per cent and that only a 33 1/3 per cent rise will be required to put them over the top.

If anyone, industrialist or retailer, should have doubt let him, or her, look at the still practically unexplored market that is offered by the growing number of customers among the very young, young and "teen" aged. In round figures, and counting only the white population, there are well over 40,000,000 of them divided fairly evenly between the two sexes.

Using the figures of the 1940 census, which will require some upward adjustment because of the growth of the U. S. population for an accurate calculation, the cosmetic industry deals with a market of 4,700,000 boys and 4,500,000 girls under the age of five years. There are approximately the same number of potential customers (4,750,000 boys and 4,590,000 girls) in the age groups from five to nine years, augmented by an approximate 6,000,000 youngsters between ten and twelve years. Next follow 1,065,000 boys of 13 years, 1,079,000 of 14 and 5,515,000 of from 15 to 19. As to the girls, 1,037,000 were to be found in the 13 age group, 1,044,000 in the 14 age group and 5,448,000 between 15 and 19.

While 20,216,000 of the teen and below teen-age customers are boys and only 19,651,000 girls and younger women, the male section of the demand in this group is, nevertheless, of minor importance to the growth of the cosmetic business.

All of the purchases for the age grades up to 12 years, both for boys and girls, are made by others, allowing for very slight exceptions. After twelve years of age differences are noticeable on toilet goods counters, as well as in other sections of the stores such as apparel, for example. Boys from 13 to 16 are generally accompanied by their elders, their likes or dislikes are still rarely consulted on purchases of cosmetics, toilet goods, dental and similar articles. Girls at about twelve begin definitely to take a hand. The teen-age girl customer exerts a real influence upon the cosmetics selected for her use, buys many on her own judgment and turns into a complete individualist, often paying her own way at fifteen. In other words, and speaking broadly, the cosmetic business in dealing with its teen-age and below teen-age customers faces two types of potential consumers—30,000,000 whose purchases are entirely, or in overwhelming majority, influenced by their parents or other older members of the family group, containing a higher percentage of boys and young men than girls and 10,000,000 who do their own buying, and often their own paying, including probably 7,000,000 girls and young women.

The age composition of this enormous group of customers, which, in its grand total, outnumbers by 10,000,000 potential consumers—all the women customers of the cosmetic industry in the age groups from 20 to 54, will be of considerable importance in future upon the mechanics of merchandising cosmetics for the young.

Each of the several major groups, in whatever manner it is subdivided, is large enough to make it a good prospect for any manufacturer who cares to enter the field. All have found limited attention; but the very size of the respective figures makes it only too obvious that many acres are still left untilled and new avenues to be travelled.

There can not be any doubt to even the casual observer that far reaching changes have taken place in the field of junior and below junior merchandising. No reliable figures covering the sales of cosmetics within the age groups from childhood to twenty are obtainable. However, to quote a few figures from the dress trades; infants' wear sales have doubled since 1939, junior and girls' wear grew at the same rate and boys' wear volume rose 50 per cent.

Those manufacturers who have been active in cosmetics for the very young for many years have witnessed a considerable increase in the demand for their lines and several stores have found it of advantage to open special depart-

Packaging Forum

By Josephine von Miklos

Without attempting to go into any of the very interesting and usually quite sound theories of color, it seems fair to state that color in and of itself is perhaps the most important single ingredient of a cosmetic package; just as color is important in clothes, and in decoration of all kinds of living room to kitchen utensils. We have learned a great deal about color in recent years, both from psychologists who have told us under what circumstances and for what application a color is most desirable, and from chemists and color specialists who have taught us to balance the range of hues. Not to speak, of course, of artists, both fine and commercial, who have never stopped mixing this shade and that and coming up with still another version of a color. This has gone on for centuries, and there is no reason to believe it will ever stop. We have only a very few basic colors, as everyone knows; but there is no end to their combinations and it seems quite fair to say that variations of colors are limitless as the individual ramifications of personal taste. One of the great American plastics concerns has developed 220 shades of blue dies. Every silk or cotton house brings out new color charts each year. . .in normal times that is. So important is color in every avenue of living and so avid for color has our public become that one might say we are literally drunk with color... almost all of us.

Still, and this is where we come in, when we look around a cosmetic counter, be it that of a specialty shop, a department store or a dime store, we'll soon realize that the color we see most of is pink. There are some whites, and some blues, it is true, and there is very often also the famous shocking; but by and large, we see pink, pink, pink. I, for one, have sworn time and again that I won't design another pink line. Time and again I have been proven a liar. It isn't that I don't like pink. I, in fact, love it. But there ARE other colors in the world and wouldn't it be nice if we could use them? There seems to be a trend toward a greater use of some pastel blues, right now. Still, pink prevails. Why? Well, we have said it must be because we are, after all, a pink race. In tropical countries people prefer brighter colors. That pink race business may be true, in a way, and then, on the other hand, it can't be quite true. We don't wear a great deal of pink clothes and our furniture is not usually pink. It is logical enough to use pink packages to encase things made for pink skin; and then again, it isn't so logical if we remember that contrasts are interesting and logical too. The same thing is true, for that matter, of all pastel shades. Daintiness? Yes. Softness? Yes. Charm and feminine appeal and the glow of candle light and peach-like cheeks. All right. Wouldn't it be nice, though, if we were allowed to use more imagination and apply good design all the way around without relying so very much on the appeal of just one type of color? Sometimes I think we've become a bit lazy. Pink cosmetic packages sell, we are told. So they do. But we haven't had much of a chance to see whether chartreuse or brown or black or purple or what-have-you packages sell too. As a matter of fact, and none of us likes to admit it, some amazing atrocities in package design and color combination have sold extremely well by sheer force of promotion. The thing is, simply, that pink is so safe!

Is there, perhaps, some hidden and mysterious and deeply philosophical reason for pink beyond the fact that we like it? Has this love for this natural acceptance of pink, perhaps something to do with all the trees around us being green? Which is not meant to be quite as facetious as it sounds. Maybe we don't HAVE to know why we love pink so very much. But it would, perhaps, give the other colors less of an inferiority complex if we faced the issue squarely and got up a new kind of courage in cosmetic design.

ments or sections of their counters to take care of the cosmetic needs of their baby customers. Many are still handling them exclusively in connection with their toilet goods counters. Others have taken to separate displays as part of the "baby needs" displays. Gift merchandise is bought freely and heavily pushed by the counters.

While counters have greatly favored medium priced merchandise, until more recently in the one to five years age cosmetic grades, a change has taken place. Customers want higher priced and eventually higher qual ty goods, lines that go above the utility level. This makes an attractive opening for many cosmetic manufacturers who in the past have neglected the baby market but today are exploring its possibilities.

It must be considered, in this respect, that baby cosmetic lines are primarily bought by two groups of customers; mothers and friends and relatives. Mothers buy for use; friends and relatives buy gifts. The mother is likely to purchase with an eye upon economy. Friends buy to give the exceptional, intriguing packaged item. The two demand curves can co-exist without hindrance to each other, each giving plenty of scope to qualified producers.

This condition undergoes a noticeable change as baby grows up and reaches the group from five to ten, possibly up to twelve.

In many respects these 15 million consumers from 5 to 13 are the most important individual consumer group for the future of the cosmetic industry. These are the years when the mind is formed, when habits are adopted that continue through life. To instil in these youngsters the need for cleanliness, the understanding that good appearance is a personal asset is of as much importance to them as it is to the nation.

For difficult to understand reasons these potential present and future consumers are only now beginning to be considered in the thinking and planning of the cosmetic industry, as much as of the cosmetic retail counters.

While food processors are beaming some of their most effective youth-programs in their direction and with excellent results, manufacturers of soaps or other important cosmetic products have not seen the wisdom as a group of following a similar course. Advertisements while abounding with an appeal to 30,000,000 women of 20 to 45 and up often forget that many of these women are mothers, have children of school age who soon will develop cosmetic tastes of their own. To shape these tastes may not be an easy task. However, to get their faces washed and receive other

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Collodion—cements
Lacquer—cements
Library—pastes
Rubber—cements

COSMETICS
Brushless—shave creams
Brush-type—shave creams
Cleansing—creams
Cold—creams
Hair Wave set—preparations
Hand—creams
Hand—lotions
Insect repellent—creams
Liquefying—creams
Mascara—compounds
Shampoo—creams
Tissue—creams
Vanishing—creams

DENTIFRICES
Alkaline—tooth pastes
Antiseptic—tooth pastes
Neutral—tooth pastes

DETERGENTS
Hand soap—pastes
Paint cleaner—pastes
Wallpaper cleaner—pastes

FOODS
Anchovy—pastes
Compounded Fruit Jams and Jellies
Concentrated Citrus Juices
Confection Toppings
Honey, 100% Pure
Peanut Butter
Prepared Cheese Spreads
Sardellen Butter

PHARMACEUTICALS
Ammoniated Mercury—ointment*
Analgesic—balms
Antiseptic—ointments
Belladonna—ointments*
Boric Acid—ointments*
Calamine—ointments
Chloramine-T—ointments
Chrysarobin—ointments*
Diachylon—ointments*
Eczema—ointments
Guaicol—ointments
Hormone & Vitamin—ointments
Iodine—ointments*
Iodoform—ointments*
Mercurial—ointments*
Mercuric Nitrate—ointments*
Nasal—jellies
Nutgall—ointments*
Ophthalmic—ointments
Phenol—ointments*
Rose Water—ointments*
Sterile Lubricating—jellies
Stramonium—ointments*
Sulfadiazine—ointments
Sulphur—ointments*
Tannic Acid—ointments*
Tar—ointments*
Unguentum*
Venereal—jellies
Yellow Mercuric Oxide—ointments*
Zinc Oxide—ointments*

TECHNICAL & MISC. PRODUCTS
Buffing Compound
Caulking Compound
Concentrated Color Paste
Lubricating Greases
Printers Inks
Soft Putties

SHOE POLISHES
Shoe—creams
Shoe Paste—polish

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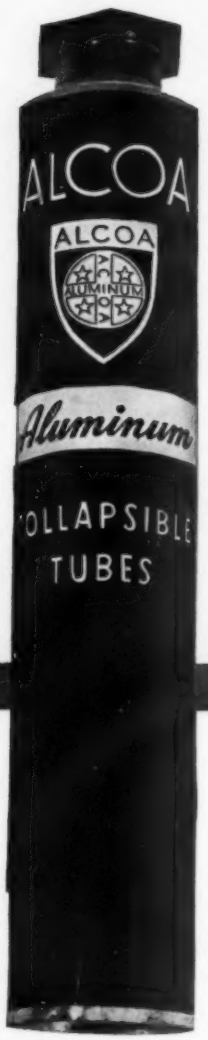

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Brush-type—shave creams
Cleansing—creams
Cold—creams
Hair Wave set—preparations
Hand—creams
Hand—lotions
Insect repellent—creams
Liquefying—creams
Mascara—compounds
Shampoo—creams
Tissue—creams
Vanishing—creams

DENTIFRICES
Alkaline—tooth pastes
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Neutral—tooth pastes

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Paint cleaner—pastes
Wallpaper cleaner—pastes

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Anchovy—pastes
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Eczema—ointments
Guaicol—ointments
Hormone & Vitamin—ointments
Iodine—ointments*
Iodoform—ointments*
Mercurial—ointments*
Mercuric Nitrate—ointments*
Nasal—jellies
Nutgall—ointments*
Ophthalmic—ointments
Phenol—ointments*
Rose Water—ointments*
Sterile Lubricating—jellies
Stramonium—ointments*
Sulfadiazine—ointments
Sulphur—ointments*
Tannic Acid—ointments*
Tar—ointments*
Unguentum*
Venereal—jellies
Yellow Mercuric Oxide—ointments*
Zinc Oxide—ointments*

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Concentrated Color Paste
Lubricating Greases
Printers Inks
Soft Putties

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Shoe Paste—polish

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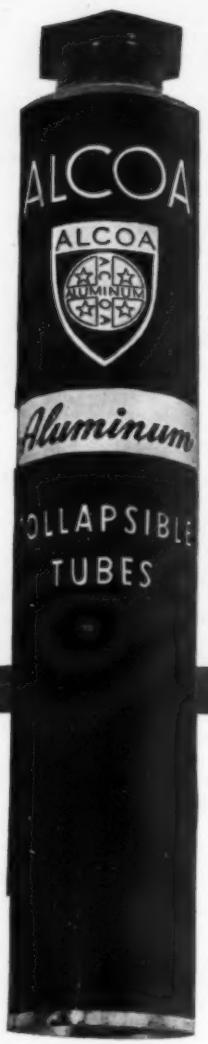

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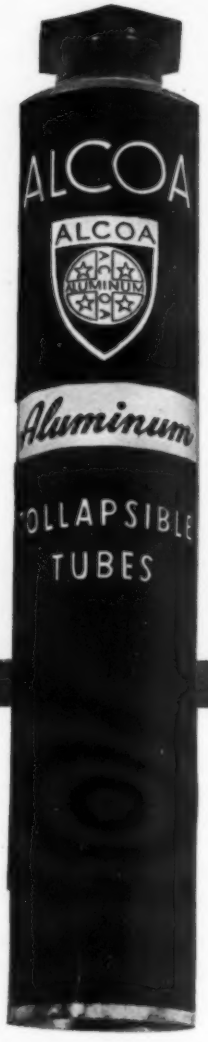


If you make any of these 70 products, chances are excellent that you can use Alcoa Aluminum Tubes successfully when they become again available to all who want them. This list is based on hundreds of tests made in the Alcoa Packaging Laboratory on samples supplied by various manufacturers of the products named.

To make certain that you *can* use aluminum tubes, either plain or with an interior coating, the Alcoa Packaging Laboratory will run a series of punishing tests on your product packed in Alcoa Tubes. This testing procedure is standard practice with us before we recommend the use of Alcoa Aluminum Tubes for any specific product.

Let this work be done now so you can know the answer by the time aluminum tubes are freely available. Tests can easily be arranged by writing ALUMINUM COMPANY OF AMERICA, 1913 Gulf Building, Pittsburgh 19, Penna.

ALCOA ALUMINUM

ALCOA
ALUMINUM

The Cosmetic Trend

The renewed interest which buyers are showing in advertised lines, following a period of indifference as to what they were buying so long as it could be sold and deliveries made on it, indicates that stores are looking into the future with different eyes than they did early in the year. Buying offices have no doubt that cosmetics and perfumes will sell as well as before. What bothers them, though, is that they cannot be sure which store will make the sale. Stores in some locations are showing severe drops while sales in others continue to expand. Buyers suspect correctly that customers are beginning to return to their pre-war loves and that refers to the store as much as to the choice of article. Unadvertised lines are liable to weaken under such conditions unless, like house brands, they have plenty of counter support. The availability of a well advertised brand becomes a distinct advantage for the store that can supply it. The lesson for industry should be that, if there ever was a time when it pays to advertise, the time is now.

This tendency to favor known brands is characteristic of every department of the counters. It affects the buying offices' interest in low priced lines as much as in the more costly items. It has special significance, however, in planning stocks for the higher priced levels. Buyers think today more often in terms of profits per sale than number of sales. It takes no more time and effort to sell a high priced item than a low priced one but the prospects of maintaining the dollar volume of the counter are of course better.

This doesn't mean that the curtain is being rung down on low priced articles for the time being but merely that stores find it more attractive to push the larger sizes of well advertised articles, when they are available, and buyers may be inclined to give them preference when ordering.

As good help is still difficult to get and training facilities are limited, the advertised article is frequently given the right of way because it offers less of a sales problem than the article that must be "sold" to the customer. The lack of help also prevents many stores from giving seasonal items the detailed attention which they had planned for them.

What stores would like to see right now is a growth in the consumer demand for whole groups of articles rather than individual items, such a group-wide development as the demand for manicure items for foot care several years ago, or the more recent upswing in cosmetic stockings and cake make-up. No suggestions are made as to where such a development can be found but there is an undercurrent of expectation in the market which can produce a rich harvest for the manufacturer who can put it to use.

Buyers point out that the economic picture of the nation is undergoing an adjustment that affects thousands of women and their home life. With more leisure they may adopt new cosmetic habits. Doubtless more entertaining will be done this coming winter among all classes of customers and women will have more time to spend upon their toilettes. Make-up, overnight attention, personal care within the home will present a different problem and resume their pre-war status. Thousands of customers of the cosmetic counters who, during the war years, have thought of cosmetic preparations as a necessity will now learn of their luxury appeal.

Maybe this will not have any appreciable effect upon the products themselves. It may, however, suggest a new slant for counter cards, sales messages and the general advertising approach. Buyers admit that they are as much in the dark as is the cosmetic industry. However, it is an undeniable fact that more attention is paid to the industry's advertising copy in buying offices these days than for years.

cosmetic attention may come easier to the six-year-old boy and his sister if the act can be connected with the accomplishments of a popular hero.

Buyers of toilet goods counters with an active clientele of mothers shopping for their younger children are inclined to think that the introduction in recent years of soap animals, "named" brushes, cosmetic packages with a definite youth slant and similar attempts to dramatize the use of cosmetics with younger children has produced a noticeable upswing in the demand for these items.

However, there is missing in this picture, in the opinion of many buyers, the connecting link that binds the still parent-dominated purchasing urge with the slowly developing individual approach to the choice of cosmetics that characterizes the teen-ager of both sexes, more noticeable in the case of the girl customer and less in that of the boy.

First purchases of lipsticks are frequently conditioned by the size of the high school girl's purse, realization of quality comes later. It would assert itself more immediately as a demand factor if the girl customer could connect her purchase with a known name, the familiar brand of a manufacturer of lipsticks and of other youth cosmetics.

It is the opinion of buyers, from personal observation at their counters, that the problem of developing their sales to teen-agers should be approached from the angle that the use of cosmetics is not an adventure but a matter of everyday necessity. Too much importance is placed upon lipsticks, nail polishes and eventually rouges, not enough upon the more obvious items with which the average girl is fully familiar such as creams, soaps, toilet waters, perfumes and, of late, cosmetic stockings. Once the younger customer has acquired the habit of using utilities, fashion takes a hand and shapes her further purchases.

Buyers are fully alive to the enormous purchasing power that has been building up in recent years behind the junior trade of their cosmetic counters and they are only too willing to make better use of it than they can do now.

This growth is not just a matter of numbers and a new interest of parents in the cosmetic well-being of their children. There is a very marked tendency to better priced merchandise.

Much of this growing demand for cosmetics, coming from the junior customers, is still supplied today from the regular stocks of the counter. Excepting the products of a few firms which have catered to the baby and sub-junior market for years and made themselves honored names, and a few new-comers of more recent date, the demand is generally filled by resorting to the more extreme shades of lipsticks, nail polishes and often (with less discrimination) to other adult merchandise.

This serves its purpose as it goes. But, it is not serving the best purposes

Put Your Products in PARADE DRESS

Clearsite*

*Reg. U. S. Pat. Off.

Plastic Containers Are UNIFORMS *of Distinction*

SEAMLESS
SHATTERPROOF
FEATHERLITE
imprinted during
manufacturing process

Also manufacturers of Extrusion and Injection Moldings

Crystal-clear, or colorfully imprinted, there is a distinctive quality in CLEARSITE containers that "dresses up" any product in its parade to the public. Many of the best known Names in drugs, pharmaceuticals, sporting goods and aids to health and hygiene use CLEARSITE—because it is attractive, offers *shatterproof* protection, and production economies.

Our Package Design Engineers are available for Suggestions

CELLUPLASTIC CORP.

CELLUPLASTIC CORPORATION

PLASTIC CONTAINERS
AND
PLASTIC PRODUCTS

60 AVENUE L NEWARK 5, N. J.

NEW YORK OFFICE—630 FIFTH AVENUE WEST COAST CONTAINER SERVICE COMPANY, LOS ANGELES 27, CAL

of a market of such tremendous potentialities as is the junior and sub-junior customer.

Twenty per cent of all the women customers in the ages from thirteen to fifty-four are teen-agers. No one can readily say what they will do for the cosmetic industry and cosmetic counters if intelligently catered to, but, no one will deny that it can be plenty.

Pink Dynamite Decision

Of general interest to the toilet goods industry is the opinion of Judge Clancy in the case of The Tayton Company v. Revlon Products Corporation in the District Court for the Southern District of New York, decided May 7, 1945.

It should be particularly noted that the opinion of Judge Clancy was given on application for a preliminary injunction and does not dispose of the case on the merits.

The decision on the trial of the case, if and when the trial occurs, will be of considerable interest to the industry.

The opinion follows:—

In the summer of 1944 the plaintiff began to plan and prepare for the manufacture and sale of a lipstick. On September 16, 1944, this lipstick was shipped under the name "Pink Dynamite." In October, 1944 plaintiff was ready to quote prices on such goods. On November 27, 1944 plaintiff registered "Pink Dynamite" as a trademark for lipsticks, powder and rouges. Face powder, make-up and rouges in both cake and liquid form were put out by plaintiff bearing the name "Pink Dynamite." The hue of the whole line was pink. In February, 1945 plaintiff advised defendant it intended to merchandise a line of cosmetics bearing the trade-mark "Dynamite." Thereafter in March, 1945 defendant advertised its manufacture and readiness to sell its product under the trade-mark or what it claimed was its trade-mark "Dynamite." Since then defendant has proceeded to spend considerable money advertising its line. Plaintiff had advertised its "Pink Dynamite" line during February and early March, using the phrase to designate a shade and. without claim of its being or being registered as a trade-mark. Thereafter it claimed the phrase as a trade-mark in its advertising. These are all the findings we can definitely make on the motion papers. The exhibits are numerous but multiple and cumulative on foreign issues.

The affidavit of the plaintiff's president, dated April 4, 1945, says that the plaintiff caused its application for the registration of its trade-mark "Pink Dynamite" to be filed and then adds: "The word "Pink' being disclaimed." This seems a rather casual disposal of what is undoubtedly part of the registered trade-mark and the defendant has ignored the disclaimer. What the plaintiff means we cannot find in the papers but we assume that it means that it has discarded and is ready and willing to discard the word "Pink" and that "Dynamite" is its trade-mark. The surrejoinder brief claims the whole phrase "Pink Dynamite" as a trademark. If there be any claim involved in the case dependent on facts not found above it must be developed on trial and left to the decision of the trial Judge.

(1) Defendant denies the validity of a trade-mark "Pink Dynamite." This issue is not to be determined on this motion for it cannot be and any observation we make is intended only to fortify the denial of a temporary injunction.

(2) Merely because the cosmetic trade makes a practice of multiplying its terms to identify its numerous products is scant reason for holding each of those terms a trade-mark which is a mark of origin. Apparently they serve some purpose since the practice seems to be universally followed but a motion's Judge would wonder if the buying public really identified the manufacturer from the terms he used for his wares or was even curious about his identity. It might well be argued that many trade-mark terms are used in the cosmetic industry with no thought whatever to identify the maker but only to convey veiled and equivocal promises and that in that sense the appearance of distinction in them is specious. Plaintiff's attorney describes the business of both parties as the sale of glamour. We accept this statement as a graphic epitome of the chief issue in the case. Glamour of the person is not salable. What the parties sell is a promise of glamour for their customers or a glamour they attribute to their article and the selling of either might imply that their mark is adopted to describe their article and is so understood by their customers. Its ephemeral value stressed by both—its life is contemporaneous with the article's popular appeal—might confirm such a conclusion. The great number of phrases and words used by the cosmetic manufacturers as marks to distinguish their numerous products may indicate their understanding that the marks are employed to insinuate the inherence of some characteristic virtue or quality in the article and therefore are not fanciful. Any reference implied to the maker would be incidental. A trial is required to develop this issue.

(3) Plaintiff also stresses its intention from the beginning to use "Pink Dynamite" as a trade-mark. This is not conclusive on any issue. Assuming that the plaintiff here intended to use "Pink Dynamite" as a trade-mark and that his failure to do so until February of this year or later was the result of circumstances over which he had no control, the defendant's conduct in the circumstances must be appraised. A man may be quite innocent himself and yet do things which mislead his neighbor. The law wisely attributes to him the aim which his acts are designed to accomplish. Intentions are subject to change as we all know and the intention to use a device as a trade-mark might be changed after the date of registration and the registrant's conduct thereafter could be taken to prove it.

(4) The defendant's claim, made in the course of its advertising, that its device is a trade-mark cannot be accepted by us as an admission on their part that the plaintiff's device is one. It may develop importance on the trial of this action or even the companion action instituted by the defendant, but cannot be taken as in any way decisive of the plaintiff's claim on this motion.

This is a case that should be disposed of only after a trial. The defendant seems to be financially responsible and, while the plaintiff's interests are great, we are unable to determine its rights with the certainty which alone at this stage of this action would warrant the issuance of an injunction.

The motion is therefore denied.

Forever Amber

Forever Amber is another new perfume presentation which will be launched along about September first by Kay Daumit, Chicago. Forever Amber was, of course, inspired by Kathleen Winsor's book by the same name. MissWinsor has consented to endorse the product and to cooperate in the merchandising of it. If movie committments do not interfere, she will make personal appearances in department stores autographing introductory sales. The bottle holding Forever Amber is decorated with gold and fuchsia. The fragrance is a sweet spice effect which is going to be introduced in one dram size only and eventually in one and one-half ounce sizes. An extensive advertising campaign is planned tying in the dramatic past with the woman of today.

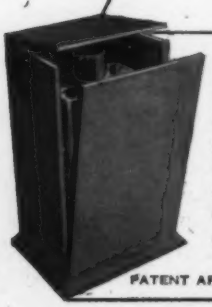
The Eye Chooses

BEFORE THE MIND ACTS . . .

It takes the outside to sell what's inside! Be it beans or beauty cream, the day of the bulk sale went out with the cracker barrel in the general store.

The eye instinctively halts when it singles out a Warnercraft container. Naturally the many intriguing new materials will play an important part in this postwar race for attention, (Warner research leads in this direction) but the basic reason for Warner Brothers' superiority in the packaging field is the surpassing skill of resourceful Warner craftsmen.

They know materials — they know products — they know sales psychology and what makes people buy. All these are valid reasons why it is good sales and profit insurance to plan your drug, cosmetic and other product containers with Warner Brothers now.



Warnercraft Tekwood* is one of the many new packaging improvements developed by Warnercraftsmen for post-war use. Light in weight as cardboard, yet many times as strong, it is adaptable to any type of covering. It is especially suitable for boxes intended for re-use.

PATENT APPLIED FOR *REG. U. S. PAT. OFF.

WARNERCRAFT

"THE FINEST WORD IN PACKAGING"

Makers of set-up and folding boxes of all types, transparent acetate containers, hand made specialties, counter displays and dispensers.

THE WARNER BROTHERS COMPANY

Main Office and Factory: 325 Lafayette Street, Bridgeport, Conn.
New York Sales Office: 200 Madison Avenue, New York, N. Y.

The Apollo line of men's toiletries by Lysanda, Inc., is keynoted by a handsomely sculptured bronze head of Apollo.

Man of Manhattan toiletries are packaged in masculine fashion in tall bottles carrying the silhouette of the New York skyline.

Love-in-a-Mist is the intriguing name of a new line of attractively packaged toiletries introduced by the Maria Danica Corp.

Primitive Art

Tuvaché has come along with a fabulously packaged perfume at a fabulous price. ZeZan is the name of the new Tuvaché perfume presentation. A replica of the Benin head of an African princess created in ceramic and finished in burnished gold covers the gold bottle which stands on a base of wood. Zezan perfume itself is described as an emotional, sultry fragrance that is dry but not cloying. Tuvaché has done quite a job of combining a sultry perfume with the primitive and fascinating African art of the thirteenth century. The price? Seventy-five dollars an ounce!

Men's Toiletries

Men's toiletries lines seem to be popping out all over. It's just a question which is getting more attention, the teen-age market or the men's market, or maybe at this point they are neck and neck. It appears that everyone is either introducing or planning to introduce a new men's line. To mention a few: There is the Cargo line which will be marketed along about October first by a new organization Duncan Storm, Ltd., Inc., in Minneapolis. Apollo is the name of a line of men's toiletries being introduced by Lysanda, Inc. This is keynoted by a sculptured bronze head of Apollo which marks all of the products and is accentuated by the gleaming bronze finish of the shaving bowl and bottle caps. The packages combine deep brown with bronze accents. Sutton Sales, Inc., augments its bath line for women with a toiletries line for men symbolized by the colorful figure of a military potentate of India. The bottles are in black and gold and Bengal red and gold. The series includes cologne, after-shave and talc, with other items to be added during 1946. The fragrance is tangy, outdoor, and masculine. Prince George, Ltd., has created the Rex line of men's toiletries, packaged in simple black and white which marks the women's line also. Lightfoot Schultz will soon release its Royal Oak products. Man of Manhattan offers an after-shave lotion, cologne and deodorant, packaged in black with the New York skyline as its motif. The bottles carry the New York skyline effectively in silhouette. Deluxabath of Chicago is featuring Diplomat Creme Shampoo for men and there is also a Diplomat general line for men about to be advertised.

There are others with a promise of many, many more to come.

Turache's presentation of ZeZan combines a sultry perfume with the primitive and fascinating African art of the thirteenth century.

Sutton's new line for men is symbolized by the colorful figure of a military potentate of India, in black and gold and red and gold.

Beauty Products uses pre-measured capsules for its hair rinse in order to assure uniform color and even dependable rinse results.

"Time for Trol . . ."

Special occasions emphasize the importance of hair control for a well groomed appearance . . . but with users of Trol, care of the hair is no problem.

Trol, a product of the Odell Co., Inc., Newark, N. J. is recognized nationally as an effective, non-alcoholic oil hair dressing and scalp massage.

The distinctive Trol bottle is securely sealed with a Crown Screw Cap. Only Crown Screw Caps have the patented Deep Hook Thread construction that gives double sealing pressure with the same amount of application force.

Crown Cork & Seal Company, Baltimore 3, Maryland.
World's Largest Makers of Metal Closures.

CROWN CLOSURES

LOOKING INTO THE FUTURE

When you think of bottles think of

Swindell

Machine made and hand made glass containers for cosmetics, drugs and beverages.

SWINDELL BROTHERS, Inc. BALTIMORE, MARYLAND

200 FIFTH AVENUE, NEW YORK ROBERTO ORTIZ—HAVANA, CUBA

METAL FOIL *can take it!*

WRAP your product in metal foil and *know* it's well protected! That's because Trans-Pac's metal foil packages safeguard it from heat, moisture and dirt right up until the minute the package is opened.

Whether it's metal foil or any one of many other superior packaging materials, Trans-Pac can plan your packaging needs now. In addition to our own staff, we work closely with the engineering and research divisions of the leading manufacturers of packaging supplies.

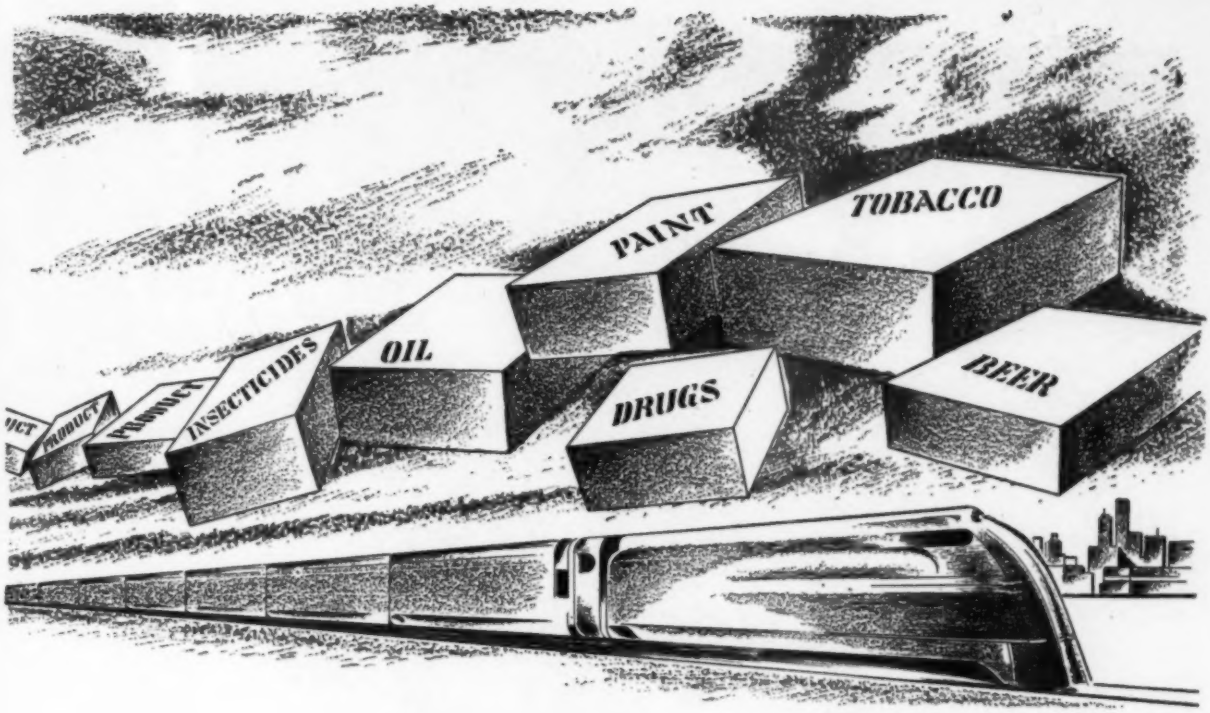
Our long experience dealing with diversified products equips us to turn out the best in modern packaging. We should be happy to advise you on your particular post-war packaging needs.

TRANS-PAC SERVICES, INC.
PACKAGES PRODUCTS
for the following organizations:

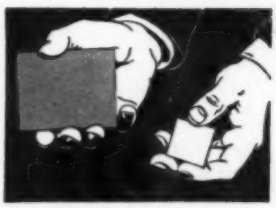
EASTMAN KODAK CO.
CAMPBELL'S SOUP CO.
J. C. ENO, INC.
BLOCK DRUG CO., INC.
THE KNOX CO.
FOSTER MILBURN CO.
THE NORWICH PHARMACAL CO.
HUMPHREY'S MEDICINE COMPANY
GENERAL MILLS, INC.
C. J. VAN HOUTEN & ZOON, INC.
THE ANACIN CO. "WHITEHALL"
CARTER PRODUCTS, INC.
THE ARNER CO., INC.
KORAL LABORATORIES, INC.
JOHNSON & JOHNSON INTERNATIONAL
WALLACE & TIERNAN CO., INC.
DR. D. JAYNE & SON, INC.

TRANS-PAC SERVICES, INC.

602 WEST 52ND STREET, NEW YORK 19, N. Y.



How a piece of STEEL and a little TIN lower your SHIPPING COSTS!



It's more than 98% steel, less than 2% tin

• Weight makes freight . . . and freight increases costs. So, you cut shipping costs on many of your drugstore items when you use the lightweight steel-and-tin can . . . which is more than 98% steel, less than 2% tin.

You protect profits on your drugstore items *three* ways with the help of the steel-and-tin container: (1) you spend *less per pound* of goods, because cans are *light;* (2) you need *less shipping space,* because cans are *compact;* (3) you save *time and labor,* because cans don't break, require no special handling and packing.

These hard facts explain why so many manufacturers of drugstore items pack and ship in trouble-free cans. Because they're light, compact and unbreakable, druggists and consumers also prefer them.

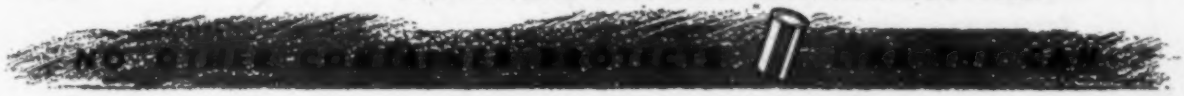
Acquainting America with CAN advantages

Full-page ads . . . full-color ads (totaling more than 26,000,000 printed messages) appear this month in 9 national magazines and in the magazine sections of Sunday newspapers from coast to coast. That's why America's buying millions are becoming better and better acquainted with all the advantages of products packed in steel-and-tin containers.

ADDED ADVANTAGES OF CANS FOR PACKING DRUGSTORE ITEMS

1. Labels can be lithographed on cans.
2. Cans don't break, split or tear.
3. Cans are attractive . . . display to advantage.
4. Cans protect contents against bathroom moisture and accidents of handling.

CAN MANUFACTURERS' INSTITUTE, INC., NEW YORK



"M–M...PFUT–T–T...SPUTTER..."

"LOOK, LADY, I'M JUST WHAT YOU NEED."

Exit: The "Silent" Salesmen!

COATED LITHWITE MAKES YOUR PACKAGE SPEAK UP... AND SELL!

THE "Silent Salesman" package or folding carton did all right so long as there was plenty of sales clerks to help it off the shelf.

But, tomorrow, with rising operating costs forcing more and more retailers into self-service, packages will be *on their own*. They'll have to speak up and stand out in mass counter and shelf displays. They can't be "silent" salesmen. They'll have to out-talk competition if they're going to out-sell competition.

And that's where Cartons of Coated Lithwite can help

This revolutionary, machine-coated paperboard makes it possible to print a *speaking* likeness of your product on your package... one that says "Stop, Look, Listen!" For *Coated* Lithwite has a velvet-smooth surface... a perfect base for printing plates and inks. Colors come up crisply, brilliantly. Your package has a quality look and feel that makes customers instinctively reach for it.

Keep *Coated* Lithwite Cartons in mind as you set up your post-war packaging plan. Clip the memo below and keep it within easy reach for the day when Gardner-Richardson can again accept new orders for "talking" folding cartons made of this revolutionary machine-coated paperboard.

CLIP THIS!

File this Coated Lithwite memo for reference when this quality paperboard is again available

1. Made by a revolutionary process. *Coated* Lithwite is the brighter, whiter paperboard that is formed, made and coated in one high-speed operation. Proved and improved for six years.

2. Means more eye-appealing cartons. *Coated* Lithwite's smooth, velvety, chalk-free surface forms a better base for printing inks and plates—reproduces even the smallest type cleanly, crisply. Brings colors up brilliantly—gives halftones a sharp realism.

3. Fewer jammers and leakers. *Coated* Lithwite scores accurately without flaking or shattering. Takes a positive, tight seal.

The GARDNER-RICHARDSON Co.

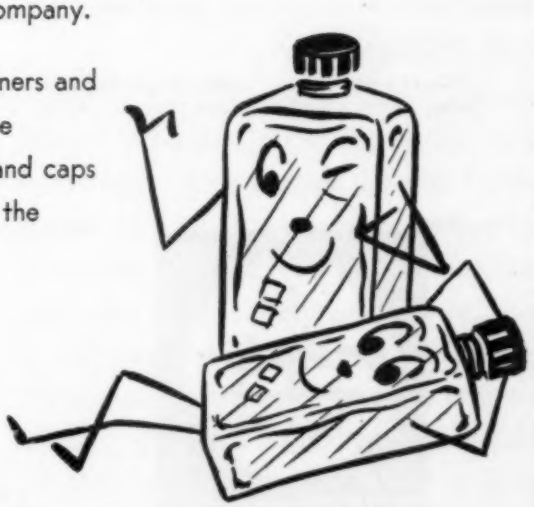
Manufacturers of Folding Cartons and Boxboard

MIDDLETOWN, OHIO

Sales Representatives in Principal Cities: PHILADELPHIA • CLEVELAND • CHICAGO • ST. LOUIS • NEW YORK • BOSTON • PITTSBURGH • DETROIT

Mr. Slowey, of the Glass Container & Cap Outlet Company, could tell numerous stories about snagged businesses that blew their tops because of the cap and container shortage. Lots of these stories had happy endings, with the able aid of the Glass Container & Cap Outlet Company.

It adds up to this: You need the proper containers and caps to keep things moving profitably. We have available many quantities of bottles, containers, and caps of all sizes and shapes. We hope they are just the types you are looking for. They're ready for immediate shipment to you.



glass container & cap outlet co.

876 Broadway
New York 3, N. Y.

containers & caps bought! cash in on your useless accumulations and outdated stock!

CONTACT US TODAY! phone ALgonquin 4-6066

Your operation, too,

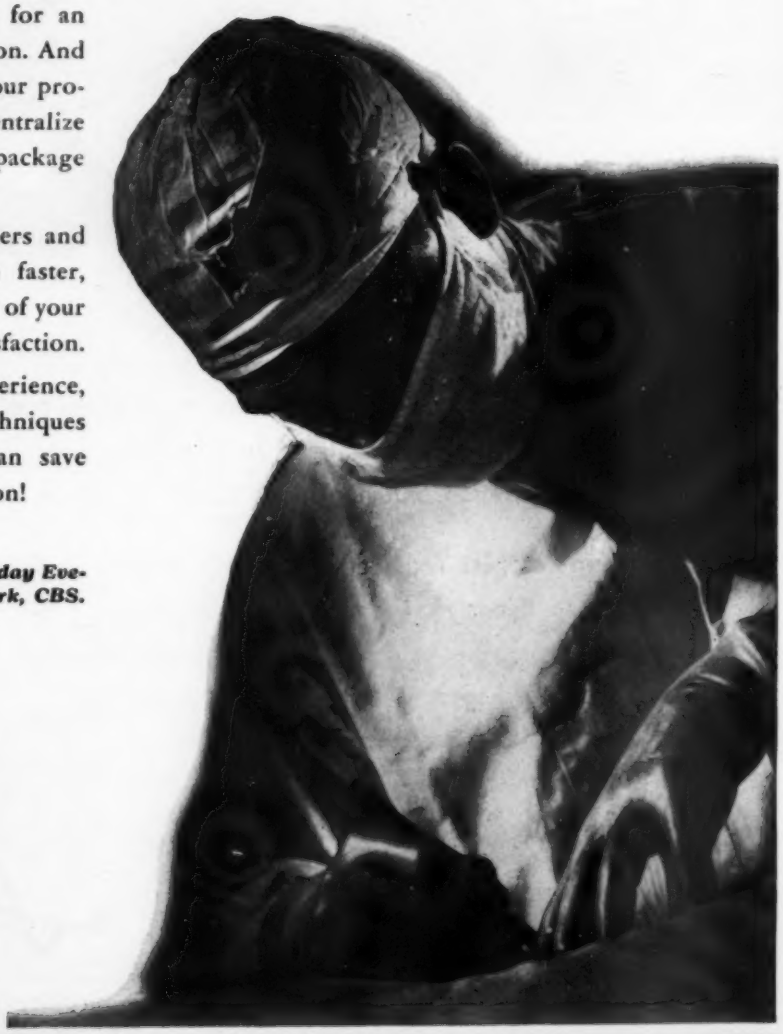
calls for Centralized Responsibility!

YEARS of experience—knowledge of the latest techniques—precise skill—these are the reasons why responsibility for an operation centers on the head surgeon. And the same qualifications will speed your production line operations when you centralize responsibility for your complete package with Anchor Hocking!

Trouble-free Anchorglass Containers and matching Anchor Closures handle faster, seal perfectly, and protect the quality of your product for lasting consumer satisfaction.

Let us show you how years of experience, knowledge of latest packaging techniques and precise manufacturing skill can save money and troubles in your operation!

"Meet Corliss Archer" every Thursday Evening, entire Coast-to-Coast Network, CBS.



The Package of The Future

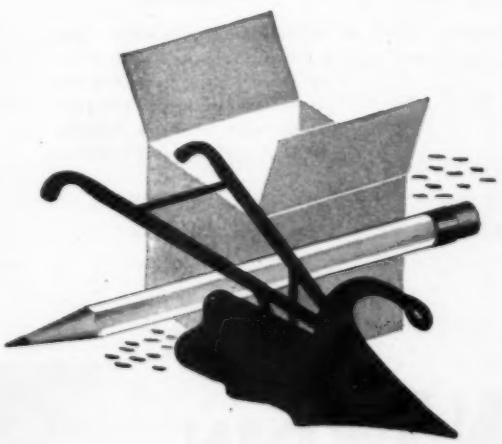
GAIR

In 1896

This famous package took the cracker out of the barrel. Made by Gair, it was the paper box that actually revolutionized food merchandising.

In 1942

This noted package took the balanced ration of the mess hall into the fox hole. It provided a hazardproof meal under any emergency. Tens of millions of these life saver containers were manufactured by Gair.



In 195?

Tomorrow's packaging problems are being solved today by Gair ingenuity. The principles of packaging that are meeting rigid wartime standards, will be utilized in packaging everything from pencils to plowshares.

For 80 years, Gair has been a major contributor to the scientific art of packaging. Many of the great industries of America and the world have turned to Gair to solve their packaging problems. Many an obscure product has achieved international distribution due to the ingenious packaging ideas of Gair. The paper box for Uneeda Biscuits back in 1896, is but one example. And out of the necessity of this great war, Gair engineers have developed amazing contributions in packaging everything from blood plasma to airplane parts.

• *Make your postwar packaging plans now and gear those plans to Gair.*

SAVE WASTE PAPER

ROBERT GAIR COMPANY, INC., NEW YORK • GAIR COMPANY CANADA LIMITED, TORONTO

Folding Cartons • Box Boards • Fibre and Corrugated Shipping Containers

"It's a lot to ask-but my lines shut down Monday morning if I don't get 'em!"

Saturday, Jan. 20, 1945

DISTRESS CALL: 8:30 Saturday A.M.

PRODUCTION STARTED: 9:30 SAT. A.M.
PRODUCTION COMPLETED: 2:30 SUN. P.M.

DELIVERY 700 MILES AWAY 7:15 Monday A.M.

So our customer in distress was able to keep his production lines moving after all because of two factors typical of the Bernardin organization, equipment and service.

Our own equipment, much of it built in our own shops, is perhaps the most effrcient of its kind in the world. That's only natural since we've been building closures since 1881—and we know how!

Our people, among whom are many second and third generations of Bernardin employees, are skilled men and women who, by training and desire, respect the importance of the part they play in an organization distinguished for service.

We have no ambition to make "trouble shooting" our principal business but, when a Bernardin client is in trouble, we'll shoot and shoot fast—and cheerfully.

● We would welcome discussions of your problems—if any—by mail or over a pipe in our office or yours. Why not let us be hosts to you and your troubles while we discuss Bernardin service as applied to your problems?

use **BERNARDIN** closures

"For distinguished service"

BERNARDIN Bottle Cap Company · Evansville, Indiana

Since 1881 America's First Manufacturers of Metal Closures

HE LOOKS THROUGH ARMOR PLATE OF GLASS

A pilot of a big bomber needs clear, undistorted visibility. Today curved sections of glass are replacing plastic in bomber noses. This special glass is curved with virtually no distortion of vision, yet it will stop armor-piercing bullets up to 50 caliber.

We do not make this new miracle glass. Its manufacture is a highly specialized field. But we do believe that the spirit of progress which created this and other new forms of glass, will make for a brighter tomorrow for the entire glass industry.

Here at Carr-Lowrey we have specialized since 1889 in the making of fine glass containers. This specialization has resulted in the production of *better* glass containers. Among users, Carr-Lowrey containers are known for their outstanding excellence.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE, MD.
New York Office: 500 Fifth Ave.
Chicago Office: 1502 Merchandise Mart

BRIDGEPORT...

For the past two years our facilities have been devoted almost exclusively to the production of war materials. We have been fortunate, in that we have been able to handle this work on the same equipment used for our regular peace time products, and, consequently, when material again becomes available for lipstick containers, vanity cases and other metal cosmetic items we will be prepared to start producing our regular line immediately. If you too are planning your post war program, we will be glad to assist you.

THE *BRIDGEPORT* METAL GOODS MFG. CO.

Established 1909

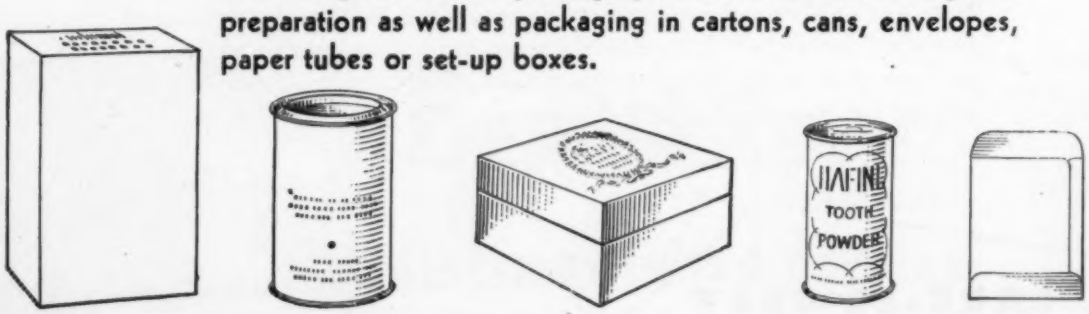
BRIDGEPORT 'PHONE: BRIDGEPORT 3-3125 CONNECTICUT

VANITY CASES • ROUGE CASES • PASTE ROUGE CONTAINERS • LIPSTICK HOLDERS (ALL TYPES) • POWDER BOX COVERS • EYEBROW PENCIL HOLDERS • BOTTLE CAPS • JAR CAPS • METAL NOVELTIES TO ORDER

Yes Sir!
We Can Package Them For You

Open capacity now available on High Speed Automatic Machinery for packaging dry powders - drugs - cosmetics - chemicals.

Our complete custom packaging service includes mixing and preparation as well as packaging in cartons, cans, envelopes, paper tubes or set-up boxes.



The Stevens-Wiley Manufacturing Co., Inc.

Hancock, Palethorp & W. Berks Streets, Philadelphia 22, Pa.

Phones—Regent 1616-1617

THE UNITED STATES NEWS

Protective cans for paint.....For polishes, as well

Paper cups for in-plant meals.....And kitchenware that's swell

ARE ALL MADE BY CONTINENTAL CAN COMPANY

There isn't enough space here to describe *all* the things made by Continental today.

Our Paper Division alone, for example, makes not only paper cups but paper and fibre containers of all types and sizes. And the products packed in these dependable, protective containers range from cottage cheese to chemicals.

Making war products is the main job of all our divisions today. But when the war is won, keep your eye on Continental and on Continental's trademark. You'll be seeing the Triple-C on more and more quality products in industry and in your home.

★ ★ SALVAGE EVERY TIN CAN ★ ★

Products and Divisions of Continental Can Co.
100 East 42nd St., New York 17, N. Y.

CONTINENTAL PRODUCTS: Metal Containers · Fibre Drums · Paper Containers · Paper Cups · Plastic Products · Crown Caps and Cork Products · Machinery and Equipment.

OPERATING DIVISIONS: The Container Co., Van Wert, Ohio · Keystone Drum Company, Pittsburgh, Pa. · Berkshy Fibre Can Division, Roxbury, Mass. · Mono Containers, Newark, N. J. — Plastics Division, Cambridge, Ohio. Bond Crown & Cork Co., Wilmington, Del. Cameron Can Machinery Co., Chicago, Ill.

FOREIGN SUBSIDIARIES: Continental Can Company of Canada, Limited, Sun Life Building, Montreal, Canada · Sociedad Industrial de Cuba, S. A., Havana, Cuba.

KEEP YOUR EYE ON CONTINENTAL — FOR PACKAGING AND PLASTIC PRODUCTS

...in "REPORT TO THE NATION," ...every Sunday over CBS coast-to-coast network.

Here's the latest in Continental's series of ads. Each message suggests how Continental's increased facilities and wider resources can bring you the most satisfactory all-round packaging service you ever had. Look for this series full-color in leading national magazines—*Time, Newsweek, U. S. News, Business Week, Fortune.* Keep your eye on Continental, and on the Continental trademark, too! It stands for *one* company with *one* policy—to give you only the very best in quality and service.

Allure
Eternal Triangle
Cosmetics, packaged in the shimmering allure of plastic containers, exert a more potent over-the-counter allure. Pre-war experience proved that to many manufacturers.
That's why so many of them are planning now for their postwar packages of plastics. By the time plastics are home from war, their designs of today will be winning tomorrow's sales.
Plastics
DID YOU BUY YOUR WAR BOND TODAY?
Sales
For bright ideas in containers for cream rouge, dry rouge, mascara, face powder or lipstick . . . for custom molds or stock specialties . . . consult the oldest name in Plastic Cosmetic Packaging—KURZ-KASCH, originators of the screw-top Plastic Rouge Box. No obligation.

KURZ-KASCH

For over 25 years Planners and Molders in Plastics

Kurz-Kasch, Inc., 1421 South Broadway, Dayton, Ohio
Branch Sales Offices: New York • Chicago • Detroit • Indianapolis • Los Angeles • Dallas • St. Louis • Toronto, Canada
Export Offices: 89 Broad Street, New York City

Put LUSTEROID on your Mental Buying LIST

Give Your Post-war Packaging these LUSTEROID *Advantages*

Picture your post-war products in LUSTEROID vials and tubes and you'll see many reasons why these modern plastic containers can pep up your future sales.

LUSTEROID combines product visibility with full protection. For all its light weight, it is strong, rigid, unbreakable. You have all colors of the rainbow to work with in clear or opaque vials and tubes. Your sales message can be printed right on the container so that no labels are necessary. You save additional expense in lower shipping and packing costs.

These crystal-clear containers come in standard diameters from ¼" to 1¼" and lengths up to 6". Cork, slip-on or screw-cap closures.

Write for post-war details

LUSTEROID CONTAINER CO., INC.

Formerly Lusteroid Division of Sillcocks-Miller Company

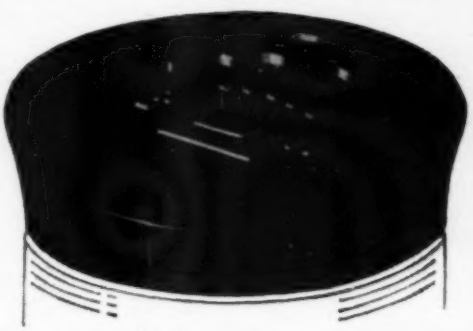
Office and Factory

10 W PARKER AVENUE, MAPLEWOOD, N J
MAILING ADDRESS SOUTH ORANGE N J

EYE-CATCHING IDEAS FOR YOUR PRIVATE MOLD CAPS

SIMPLICITY marks this modern, low-cost Armstrong's Artmold Cap. Your brand name can be pressed and filled in with eye-appealing, contrasting color.

JEWEL-LIKE, the polished facets of this distinctive **Artmold** Cap, made in your own color combination, catch customers' eyes with flashing rays of reflected light.

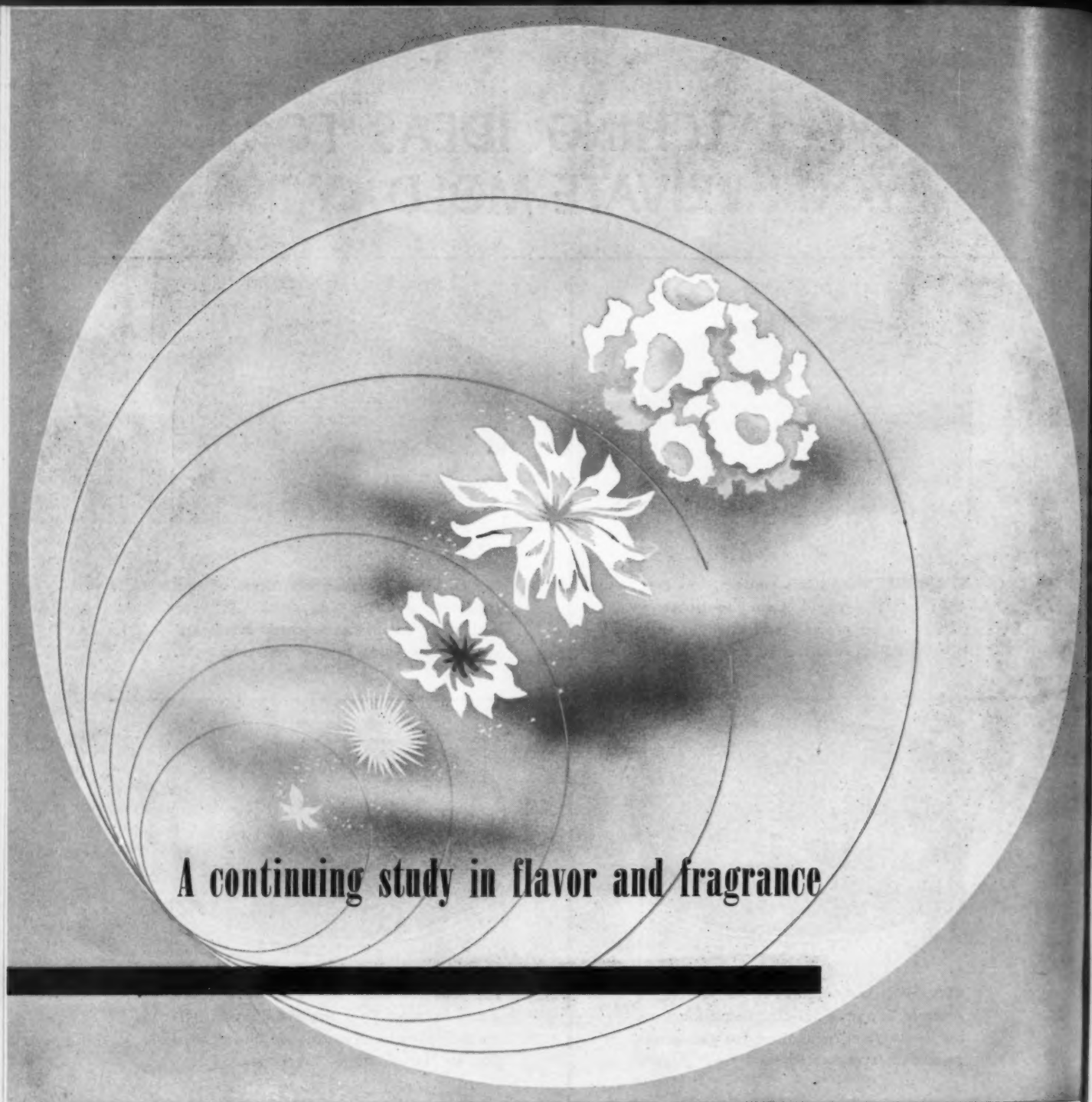


CLASSIC beauty of this decorative intaglio **Artmold** Cap provides dignified distinction, builds customer recognition for your package, and increases sales.

FLORAL and beautiful relief designs are made to meet your specifications in **Artmold** Caps to give extra style and distinction to "luxury trade" packages.

ARMSTRONG'S *Artmold* PLASTIC CAPS

YOUR PACKAGES will need extra style and individuality to compete in post-war markets. Provide it with Armstrong's *Artmold* Caps. Get free design suggestions now by sending a sample or drawing of your package to Armstrong Cork Company, Glass and Closure Division, 3808 Prince St., Lancaster, Pa.



A continuing study in flavor and fragrance

The creation of new scents and flavors is a living, growing art—a constant challenge to the skill and imagination of the blender. To give him all possible assistance, it is the aim of the chemical manufacturer to develop and produce a steady flow of new and basic materials. ☆ Mindful of this obligation, Dow's research chemists continue to develop new aromatic chemicals to expand the field of creative perfumery. The quality and uniformity of Dow Synthetic Aromatics now available reflect the manufacturing skill that is the heritage of Dow's years of experience in the chemical field.

DOW AROMATIC PRODUCTS:
Coumarin, Cyclotene, Diphenyl Oxide, Diphenyl Methane, Gardanthrol, Indol, Methyl Anthranilate, Methyl Phenyl Carbinyl Acetate, Methyl Salicylate, Palatone, Phenyl Ethyl Acetate, Phenyl Ethyl Alcohol, Styrene Oxide, Styrene P-100, Sylvenol, and others.

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN
New York, Boston, Philadelphia, Washington, Cleveland, Detroit, Chicago, St. Louis, Houston, San Francisco, Los Angeles, Seattle

Synthetic Aromatic *Chemicals*

DOW

CHEMICALS INDISPENSA
TO INDUSTRY AND VICT

NEWS...

Monsanto Transfers Dr. Metzner

Dr. Wendell P. Metzner has been transferred to Monsanto Chemical Co.'s Central Research Laboratories at Dayton, Ohio. He started in Monsanto's St. Louis laboratories as a research chemist in 1936 and since May 1940 has been research group leader of a group specializing in processes for organic intermediates. At Dayton, Dr. Metzner will head the flexible-type high polymer group.

Harold L. Hubbard, a graduate of Alabama Polytechnic Institute, who has been with Monsanto as a research chemist since August 1935 will succeed him as group leader in St. Louis.

Dr. Alfred G. Rossow is being transferred from Dayton to the St. Louis research laboratories. He was employed as a chemist at Monsanto's Plastics Division, Springfield, Mass., in June 1941, and was transferred to Dayton in August 1943.

Mowry Advanced by Borden

W. C. Mowry, Jr., has been made sales manager for the Labco and Vitamin Products Department of the Borden Co. Products under his supervision include vitamin A and D concentrates and casein for food and pharmaceutical manufacturers.

W. C. MOWRY, Jr.

Mr. Mowry joined the Borden Co. in 1942 and has been associated with the Special Products Division in a number of capacities. He has most recently been active in the integration of the newly acquired Straub Laboratories Division.

State Bar Food, Drug, Cosmetic Section

The New York State Bar Association has established a section on food, drug and cosmetic law. It is the first time in the history of the United States food and drug law that these industries have been represented in any law group.

Charles Wesley Dunn, general counsel for the American Pharmaceutical Association is chairman of the new section, and its members will include lawyers representing virtually all of the leading houses in the drug, food, pharmaceutical and other related fields.

Charter members of the section representing the drug and cosmetic industries include: Carl M. Anderson, counsel for Merck & Co.; Thomas H. Brown, Jr., American Home Products Corp.; Cecil I. Crouse, Borden Co.; Frank T. Dierson, associate counsel for American Pharmaceutical Manufacturers Association; Charles Wesley Dunn, Grocery Manufacturers of America and American Pharmaceutical Manufacturers Association; James G. Flanagan, S. B. Penick & Co.; Harold Harper of Harper & Matthews, counsel for National Wholesale Druggists Association; James F. Hoge, general counsel for Proprietary Association; George Link, Jr., general counsel for Gelatine Research Society of America; George R. Martin, Lederle Laboratories; Samuel McCain, Corn Products Refining Co.; Hugo Mock, Toilet Goods Association; David Rasch, Winthrop Chemical Co.; George Sibley, E. R. Squibb & Sons and E. Silliman, Vick Chemical Co.

CHARLES WESLEY DUNN

Powers Heads Fougera

John V. Powers was elected president of E. Fougera & Co., Inc., at a special meeting of the directors of the company held in New York, July 17. Mr. Powers who was formerly vice-president succeeds the late Montaigu M. Sterling.

J. V. POWERS

W. D. Baker was elected vice-president and treasurer and Walter L. Post, for many years a director of the company, was elected secretary.

Rodda Joins Dodge & Olcott

John A. Rodda, who recently resigned from the War Production Board after two and one-half years' service as chief of the Insecticides and Fungicides Unit, Chemicals Section, has accepted a position with Dodge & Olcott, Inc. where he will serve as assistant manager of its insecticide department, in charge of sales.

Prior to his service with the War Production Board, Mr. Rodda had thirteen years' experience in the insecticide business, first with McCormick & Co. and later with the Mechling Chemical Co. division of General Chemical Co. Dodge & Olcott's insecticide department has been expanded to include a number of new synthetic organic insecticides and insect repellents.

Hindle Visits England

J. L. Hindle, president of Standard Synthetics, Inc., New York, left for England July 30 to attend to the affairs of the company's London offices and plant. After completing arrangements for importing and exporting essential oils, flavors and perfumery materials in London, Mr. Hindle will return to New York in the fall.

During his absence James Lane, vice-president of Standard Synthetics, Inc., will direct the firm's activities in this country.

Monsanto Advances Ord and Kroeger

Robinson Ord, of St. Louis, has been appointed general manager of sales of the Organic Division of Monsanto Chemical Co. Mr. Ord, who was formerly assistant general manager of sales, succeeds Fred C. Renner who died June 26.

ROBINSON ORD

Arthur P. Kroeger, of St. Louis, has been made assistant general manager of Organic Division Sales and Charles H. Sommer, Jr., of St. Louis, will assume responsibility for sales of intermediates as well as plasticizers and resins.

ARTHUR P. KROEGER

Mr. Ord is a native of Sunderland, England, and a graduate of Oxford University's Pembroke College from which he received a B.A. degree in 1929. He started with Monsanto as a trainee in St. Louis in 1929 and has served successively as correspondent, export manager, assistant manager of sales and, since 1941, assistant general manager of sales.

Mr. Kroeger, formerly in charge of sales of intermediates, is a native of Akron and was graduated from the University of Akron with a B.S. degree in 1931. He entered Monsanto employ in 1929 as a technical salesman in the Rubber Service Division. After a period of service abroad as a technical salesman, he was stationed at Monsanto's San Francisco office and later was branch manager of the Los Angeles office. Since 1941 he has been in charge of sales and intermediates in the St. Louis headquarters.

Mr. Sommer is a native of St. Louis. He attended the universities of Michigan and Arizona, graduating from the latter in 1933 with a B.S. He joined Monsanto at St. Louis in 1934 and since 1939 has been in charge of sales of plasticizers and resins for the Organic Division.

Dr. Clark Leaves Merck for Macy

Dr. Ralph Clark has resigned from Merck & Co. and August 1 assumed charge of the prescription department of R. H. Macy & Co.

Ingram Heads Pharmaceutical Ad Club

The Pharmaceutical Advertising Club at its last meeting of the season elected the following new officers for the 1945-46 term: president, R. J. Ingram, Bristol-Myers Co., New York; vice-president, H. R. Moorman, Sarnay Products, Inc., New York; treasurer, R. N. Irons, Wallace & Tierman Prod. Co., Belleville, N. J.; and secretary, Albert J. Weisbrodt, Burroughs Wellcome Co., New York.

BIMS Golf Outing

Despite high humidity, high temperatures and high scores, due to the recent rains, the BIMS had a glorious time at Sleepy Hollow Country Club, July 26.

Martin F. Schultes, chairman, awarded to 26 prize winners a nice assortment of Victory Bonds and Stamps.

BIMS of Boston Golf

Pete Niles, chairman of the BIMS of Boston, reported that the most gala and best attended tournament since the club's inception was held at Woodland Golf Club, July 19. R. P. Robison, U. S. Print and Lithograph Co., was winner of the grand prize; Sewell Corkran, Rowell Paper Box Co., had low gross; and M. E. Nourse, Howe & French, Inc., low net.

Representation in Uruguay

Joaquin Puig Sanchez & Compania, Casilla de Correo 781, Montevideo, Uruguay, is interested in representing manufacturers of lipstick, nail lacquers and cream bases in that country.

Baker Advances Hafer and Slater

Ralph A. Clark, vice-president of the J. T. Baker Chemical Co., Phillipsburg, N. J., has announced the appointment of G. B. Hafer to the executive position of general sales manager of all Baker divisions. Since 1935 Mr. Hafer has been sales manager of the laboratory

G. B. HAFER

chemicals division. Previous to that he was manager of the company's Chicago office for several years. He has been with Baker for nineteen years.

Charles H. Slater, division sales manager of fine and industrial chem-

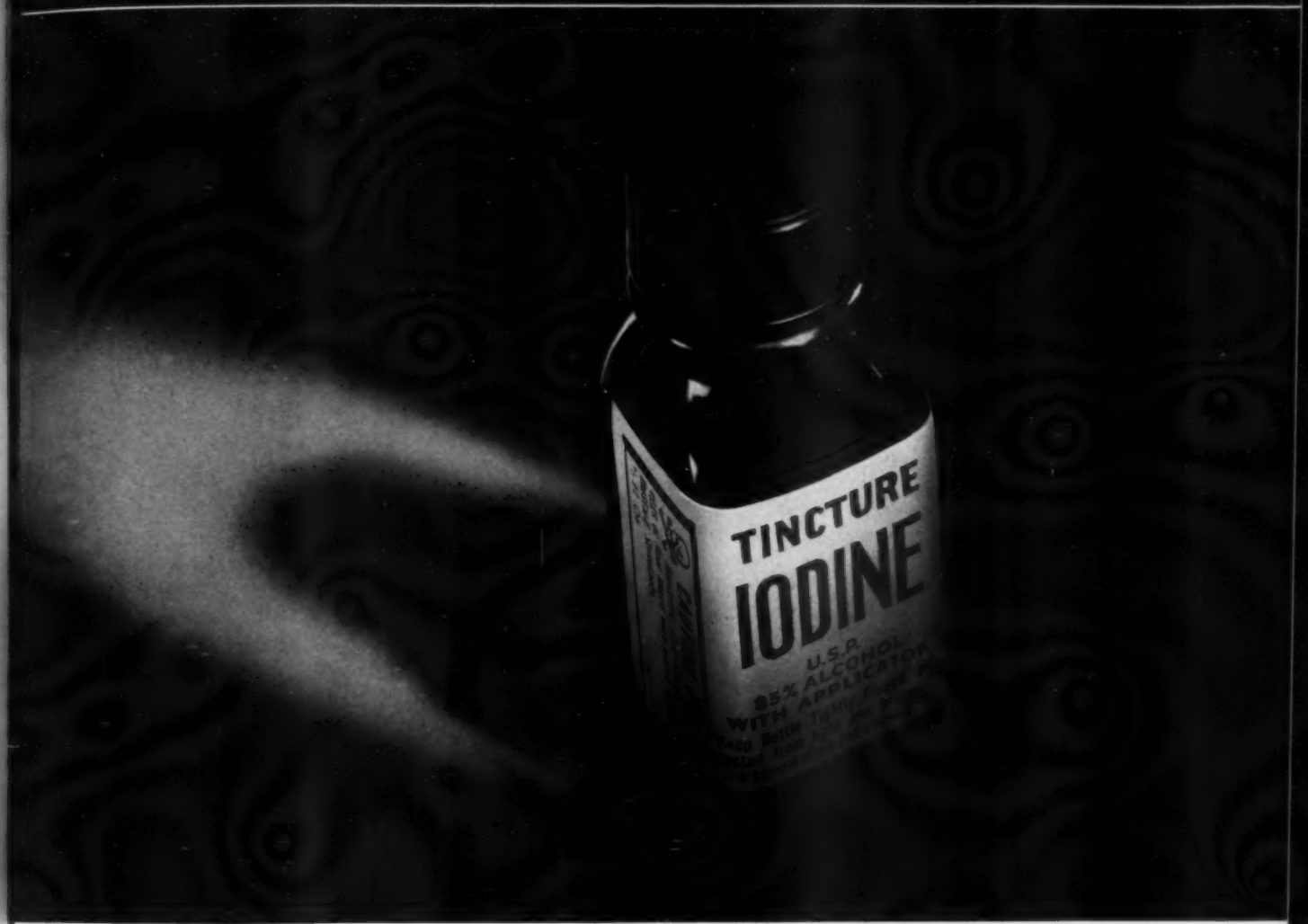
CHARLES H. SLATER

icals, will have, in addition to his present duties, the supervision of advertising and publicity. Some years ago Mr. Slater managed the company's New York office and he has been a member of the Baker organization for eleven years.

Dr. Katz Addresses Pharmacy College

Dr. Alexander E. Katz, president of Florasynth Laboratories, recently addressed the faculty and student body of the College of Pharmacy, University of Southern California. His talk was illustrated with motion pictures showing the growth and production of vanilla and the research and production activities of Florasynth Laboratories.

A vital threesome in the making of an effective germicide!



fine chemicals of measured purity

your technical skill in manufacturing

rigid laboratory control in your plant

When Sister gets a scratch on her hand, or Johnny a cut on his knee – to the rescue comes Iodine!

For numberless years, Iodine has enjoyed a wide reputation as an efficient germicide.

And manufacturers, using care and skill in the making, see to it that Iodine continues to be *good*.

They achieve their results, not by a single factor, but by employing all three of these:

– They choose, first of all, Iodine and Iodides of uniform and dependable quality.

– They scientifically compound all the ingredients into a quality-finished product.

– They maintain rigid laboratory control over all raw materials, and over the product throughout its manufacture.

This "threesome" is, indeed, all-important.

And the first of them – the selection of the basic fine chemicals – can have much to do with trouble-free manufacture, and with the success of the finished product.

That's why it's good sense to choose fine chemicals with purity to the decimal – Baker Iodine (Resublimed), Baker's Potassium Iodide, U.S.P., or Baker's Sodium Iodide, U.S.P.

Measured purity is the foundation upon which Baker has built its service for you.

For many years, leading pharmaceutical and drug companies have known, and bought, Baker's fine chemicals (purity by the ton).

No matter what product you manufacture – if it requires one or more fine chemicals, specify Baker and you'll specify quality *at the beginning*.

J. T. Baker Chemical Co., *Executive Offices and Plant:* Phillipsburg, N. J.; *Branch Offices:* New York, Philadelphia and Chicago

Baker's
FINE CHEMICALS

Fresh and exhilarating as the flower itself—WARDIA—an entirely synthetic Rose character, is meeting the most exacting demands of discriminating perfumers. Used by itself or as a replacement for the natural Rose oil it is invaluable. A Chuit, Naef product, ample stocks are available in this country—$58.00 per pound—a trial ounce $3.75.

Firmenich + Co.

135 FIFTH AVENUE, NEW YORK

CHICAGO OFFICE . . . 612 NORTH MICHIGAN AVENUE

Dr. Whiting Joins Wyeth

John A. Whiting, D.V.M., has joined Wyeth, Inc., Philadelphia, as veterinary technical advisor. He will have offices in both Philadelphia and Kansas City.

JOHN A. WHITING

Previous to joining Wyeth, Dr. Whiting was for many years manager of Armour's veterinary division section.

Ganz with John Frederics

John Frederics, New York, has announced the appointment of Paul H. Ganz as director of its Golden Arrow Toiletries and cosmetics department. Mr. Ganz has been identified with the perfume industry for the past twelve years.

Diane Wheeler Leaves Revlon

Diane Wheeler has resigned as publicity director of Revlon Products Corp. Before joining Revlon she was director of Primrose House and for seven years vice-president of Tested Selling Sentences, Inc.

Fleming Research Fund

Recognition of the contribution to human welfare made by Sir Alexander Fleming, discoverer of penicillin, has been made by a group of the nation's leading penicillin producers in the form of a trust fund totaling more than 25,000 pounds sterling, it was jointly announced by Carleton H. Palmer, chairman of the board of E. R. Squibb & Sons, and John L. Smith, president of Chas. Pfizer & Co., Inc.

Under the terms of the trust, to be known as the Alexander Fleming Fund, income and principal will be devoted to scientific research under the direction of Professor Fleming at St. Mary's Hospital Medical School, University of London.

The trust is unusual in modern medical annals for two reasons: first, Sir Alexander is being given the widest latitude in administration of the fund for scientific purposes, and secondly, the results of the research will be free for use by anyone with no restrictions.

John Hudson Moore Sales Meeting

The sales staff of John Hudson Moore, Inc. were in New York for a week's sales meeting in July. Dinner at Bill's Gay Nineties brought the meeting to a successful close.

Miller Leaves International Cellucotton

Paul Miller has left International Cellucotton Products and will head the Golden Fleece Co., a division of Federated Mills. He had been with International Cellucotton Products for twenty years.

Peterson Joins Heyden

Arthur F. Peterson has been made sales manager of the biologics department of Heyden Chemical Corp., New York. He was for several years manager of the domestic sales division

A. PETERSON

of Schering Corp., Bloomfield, N. J., where originally he organized the professional service division of that company. Previously, he was with E. R. Squibb & Sons where, over a period of years, he served in various sales capacities. A graduate of the University of Minnesota, Mr. Peterson is chairman of the sales and advertising committee, eastern section, American Pharmaceutical Manufacturers Association.

Dodge Elected U. S. I. Director

Francis T. Dodge, president of Dodge & Olcott, Inc., has been elected a director of United States Industrial Chemicals, Inc. Bracebridge H. Young, secretary of the company has been elected vice-president and secretary, and Thomas H. Casson has been appointed controller.

Dinner in honor of Sir Alexander Fleming, at the Waldorf-Astoria, New York, June 25.

Lily of the Valley #8

• A Delightful odor. Suitable for all purposes including creams.

It might pay you to investigate its possibilities.

Priced at only $8.00 per pound.

Copy of latest catalog on request

ORBIS

PRODUCTS CORPORATION

215 PEARL STREET, NEW YORK · FACTORY & LABORATORY, NEWARK, N.J.

CHICAGO 660 North Dearborn St. · PHILADELPHIA 610 Brown Bldg. · MEXICO, D.F. Apartado Postal 8919 · BOSTON 89 Broad Street · LOS ANGELES 1807 E. Olympic Blvd. · MEMPHIS, TENN. 1620 Carr Ave.

Water Soluble Gums
Thymol
Aromatics
Rice Starch

Waxes
Stearic Acid
Essential Oils
Zinc Oxide French

Cosmetic Raw Material
Oleo Resins
Perfume Bases
Olive Oil

Fruit Flavors
Food Colors
Quince Seed
Irish Moss

Tyriver Appointed by Pepsodent

R. E. Tyriver has been appointed eastern regional sales manager of the Pepsodent Division of Lever Brothers Co. He has had twenty-five years' experience in sales and sales management in the dentifrice, soap and toilet article business and has spent the past ten years in New York where he will

R. E. TYRIVER

continue to make his headquarters. Mr. Tyriver will head sales and sales personnel for Pepsodent and Lever Brothers drug products in the New York, Philadelphia, Cleveland, Atlanta, and New Orleans divisions of the company.

F. J. Stokes to Sell RCA Dryer

Arrangements have been completed for the F. J. Stokes Machine Co., Philadelphia, to manufacture and sell an all-electronic drying system developed by Radio Corporation of America to speed production and reduce costs of penicillin.

A single installation of the electronic system as now perfected is said to produce ready-to-use vials of penicillin at the rate of 2,000 an hour, with each vial containing 100,000 Oxford units. Hourly production is sufficient to treat 400 patients requiring 500,000 units each and it is possible to operate the system as much as 20 hours a day for a total of 4,000,000,000 Oxford units. The entire electronic system can be installed in a room 12 x 20 feet, yet leave ample space for loading and unloading operations. In addition to the large saving in initial investment, its cost of operation and maintenance is said to fall far below that of conventional equipment.

Garis Forty Years with Baker

The members of the J. T. Baker Chemical Co. organization paid tribute to Herbert H. Garis, president, June 28, when he completed forty years of service with the company. Over 500 employees joined in giving Mr. Garis a platinum watch, appropriately inscribed.

Following the presentation, a luncheon in his honor was held at the Hotel Easton. Those present included the Forty Year men, other officers of the J. T. Baker Chemical Co., including J. V. Hall, a member of the board of directors, and W. Y. Preyer, president of Vick Chemical Co.

Mr. Garis started with the J. T. Baker Chemical Co. in 1905 and has held progressively important positions. He was elected president in 1926.

RCA'S all-electronic penicillin drying system—the radio heat bulk-reducer (three glass bulbs), the electronic vacuum drier (center) and the dome heating tables.

Wyeth Advances Siebert

Howard F. Siebert, technical director of the nutritional division of Wyeth, Inc., Philadelphia, formerly located at the company's plant at Chagrin Falls, Ohio, has been transferred with his laboratory and staff to Mason, Mich., home of the Wyeth line of S.M.A. products.

The move was made to provide great-

HOWARD F. SIEBERT

ly expanded laboratory facilities for the control and development of S.M.A. products. A new, completely equipped laboratory has been built at Mason and additions will be made to the staff as soon as possible. Mr. Siebert will continue to serve also as technical director of the Wyeth nutritional plants at Belle Center and Chagrin Falls, Ohio.

Cheplin Appoints Stubbe

Cheplin Laboratories, Inc., Syracuse, has announced the appointment of Edmund T. Stubbe as production manager of its West Taylor Street plant in Syracuse.

Mr. Stubbe is a graduate of Wharton School of the University of Pennsylvania, and has had wide experience in the production field. He was for many years associated with a leading pharmaceutical house as production manager and assistant plant manager. For the past three years he has been with the parent company, Bristol-Myers, as personnel and employment manager of its Hillside, N. J., plant.

Hooker Bulletin

Hooker Electrochemical Co., Niagara Falls, N. Y., has issued Hooker General Products List, Bulletin 100. It is a handy, file size folder containing brief information on nearly 100 chemicals. The data included are description, chief uses and shipping container information. Several new chemicals are listed for the first time in this edition. Copies are available upon request.

Col. Berle Returns to Innis, Speiden

Colonel Charles H. Berle has been appointed coordinator of sales and manufacturing for Innis, Speiden & Co., New York. Associated with the company since 1926, Colonel Berle was called to active duty by the Army in

COL. CHARLES H. BERLE

1941 and returned to inactive reserve in June 1945.

His principal assignments included: Staff Officer with Lt. Gen. Robert C. Richardson, Commanding General, Pacific Ocean Areas; Commanding Officer, 21st C. A. Regt. and Acting Post Commander, Fort Miles, Del.

In his new post, he will coordinate research, manufacturing and sales development for Innis, Speiden & Co. and make his headquarters at the company's New York Office.

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d'Escayrac Returns to Guerlain

Bernard d'Escayrac has resumed his position as president of Guerlain, Inc., New York, after an absence of more than two years.

He trained at Fort Benning, Ga., where he was commissioned a lieutenant and served abroad with the 1st French Army for eighteen months. He was awarded the Croix de Guerre and the Bronze Star. He returned to New York by Transatlantic Clipper July 17.

Atlas Powder to Build

The Atlas Powder Co. has received approval from the War Production Board for the construction of an additional new chemicals manufacturing unit at Atlas Point Plant, five miles south of Wilmington, Del., at a cost of more than a million dollars including equipment. Several new buildings will be erected east of the present plant and they will be devoted to the manufacture of sorbitol.

Col. McKesson Decorated

Robert I. McKesson, on leave from New York Quinine and Chemical Works was awarded the leaf cluster to the bronze star on June 13. On June 20 he was promoted to the rank of Lieutenant Colonel.

According to the citation, the leaf cluster was awarded "for meritorious service in connection with military operations against an enemy of the United States from 26 April 1945 to 12 May 1945 in Germany. Acting both as commanding officer of his battalion and as a member of the division special staff, Major McKesson demonstrated his exceptional professional skill and cool judgment. The superior combat record of his Battalion is due in large measure to Major McKesson's untiring devotion to duty and qualities of leadership. The meritorious service of Major McKesson is in keeping with the high traditions of the military service."

Col. McKesson is the son of Irving McKesson, president of New York Quinine and Chemical Works. He returned to this country early in August.

Captain Alexander Decorated

Paul W. Alexander, on leave as advertising representative of DRUG AND COSMETIC INDUSTRY has been given the Bronze Star Medal for "meritorious service in connection with military operations from 3 May to 8 May 1945. As commanding officer of Company F, Second Battalion, 156 Infantry Regiment, Headquarters Command, Supreme Headquarters, Allied Expeditionary Force, Captain Alexander assisted in the preparation of documents and plans in connection with Germany's surrender and in the arrangements for the meetings in Reims, France, and Berlin, Germany, between the representatives of the Allied Nations and the German Military, at which the terms of the unconditional surrender were signed. He contributed materially to this important task."

National Drug Advances Lewis

C. E. Lewis of Newport, Vt., has been appointed New England divisional manager of the National Drug Co. He has been the company's professional service representative in the state of Vermont for a number of years. Mr. Lewis will make his headquarters in the vicinity of Boston.

Major Phibbs Gets Bronze Star

Brendan P. Phibbs, member of the Harry C. Phibbs Advertising organization in Chicago has been awarded the bronze star medal for meritorious service from December 13, 1944 to May 5, 1945 in Eastern France and Western

MAJOR B. P. PHIBBS

Germany. A major in the Medical Corps he served as surgeon of CCB and personally supervised and aided in the organization for the evacuation of the wounded. The citation reads: "He frequently exposed himself to enemy fire in order to see that evacuation was accomplished expeditiously and by routes that were relatively safe from enemy fire. Through his efforts, first and second echelons of medical support were effectively coordinated, resulting in a saving of time and lives. Major Phibbs' devotion to duty reflects the highest credit upon himself and the Medical Corps."

Gardiner Made Vice President

Carl Gardiner, sales manager of Schnefel Brothers, Newark, N. J., makers of La Cross manicure implements and nail preparations, has been appointed vice-president in charge of sales and advertising.

"Back Seat" Party

Paul H. Douglas, president of Bourjois, Inc., and Stanley H. Chambers, advertising manager, were among the "waiters" at the "Back Seat" party given for 300 Purple Heart servicemen and their girls at the Cafe Zanzibar. After the servicemen were dined and wined at Cafe Zanzibar they were taken to the CBS Playhouse to be entertained by the "Romance Rhythm & Ripley" broadcast and an all-star show. The "Back Seat" Committee raised $6,200,000 in war bonds.

ADVERTISEMENT—*This entire page is a paid advertisement.* *Prepared Monthly by U. S. Industrial Chemicals, Inc.*

U.S.I. CHEMICAL NEWS

August ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1945

Two Multi-Purpose Non-Phthalic Resins of Proven Practicality

Aroplaz 1125 & 1127 Are Fine Enamel Liquids for Brush, Spray or Dip Use

These two oxidizing, modified alkyd resins, S&W Aroplaz 1125 and S&W Aroplaz 1127, are highly successful alternates for phthalic alkyds in the preparation of coatings. Both resins have excellent initial color and color retention, making them suitable for whites and light tints. Initial gloss and gloss retention are excellent in both. Exterior durability is good, making them useful in exterior coatings where exposure is not severe, as well as for a wide range of interior applications. Use of reactive pigments with these resins should be avoided.

Probable Availability

Phthalic-free, these resins are more available than phthalic alkyds, although uses are still limited to some extent (allocation Order M-300, Schedule 103). They will probably be available for uses such as industrial equipment, tools, machinery, interior marine finishes, new farm implements, food-container exteriors and transportation equipment.

S&W Aroplaz 1125 is supplied in mineral spirits, and is adapted to a wide range of applications. It has good overnight drying properties, and light-colored bake finishes are obtainable in one hour at 200 F.

S&W Aroplaz 1127 is supplied in VM&P Naptha, a faster-evaporating solvent. The resin is faster drying than "1125". It air-dries hard in 8-10 hours, and bakes in one-half hour at 200 F.

Samples of both resins, and additional data are available on request.

SPECIFICATIONS

	S&W Aroplaz 1125	S&W Aroplaz 1127
Solids	50% in MS	50% in VM&P Naphtha
Solution Viscosity (G-H)	R-T	Q-R
" Color (G-H)	9-11	9-11
" Wt/gallon @ 25C	7.5 lbs.	7.4 lbs.
Plastic Acid No.	22-28	22-30

Lactyllactic Esters Made By New, Faster Process

Lactyllactic esters, valuable as solvents and plasticizers, may be produced on a commercial scale by use of an invention dedicated to the free use of the people of the United States. The esters produced by this process are said to be colorless, odorless, and of high molecular weight and low vapor pressure.

Essentially the new process comprises heating a dehydrated lactide with anhydrous mono- or poly-hydric alcohols in the presence of an acid catalyst. When the alcohol used is anhydrous ethanol, the end product is ethyl lactate, a colorless, odorless, slightly viscous liquid. From n-butanol, n-butyl-lactyllactate is produced, while ethylene glycol produces water-soluble beta-hydrozyethyl lactyllactate.

Ethanol-Water Fractionating of Proteins Points Way to Improved Immune Serums

Higher production of Pyrogen — Free Sera Forecast

Tetanus antitoxin to be produced by a new method will not cause the chills so often accompanying use of this antitoxin, nor will pyrogen-induced fevers follow use of any serum properly produced by the new process.

Separation of various protein fractions of blood plasma by ethanol-water fractionating, at low temperatures, was first used on a large-scale basis in production of serum albumin. However, this use of ethanol-water fractionating will probably be overshadowed by its use in making improved immune serums.

While finished serums and antitoxins produced by the usual salting-out-and-in process are free from bacterial contamination, few of them are free from pyrogens. It is virtually impossible to prevent entry of air-borne bacteria into the blood plasma during separation of the protein fraction which contains the anti-bodies. Growth of these bacteria results in fever-inducing pyrogens. With ethanol-water fractionating, the protein separation takes place at a temperature so low that pyrogens cannot develop, for the bacteria cannot grow.

At Lederle Laboratories, production of serum albumin led to interest in further possibilities of the ethanol-water process. They expect that the current loss of sera during processing will be materially reduced by ethanol-water fractionating. Purer products, too, are anticipated, as the new fractionating process is more exact, and is less dependent upon the operator's judgment.

Principle of the New Process

Certain details of ethanol-water fractionating at reduced temperatures are still under the protective cloak of secrecy. However, it depends upon physical-chemical principles far more complex than ethanol-precipitation. In practice, it is found that the five main blood proteins — alpha, beta and gamma globulin, fibrinogen and serum albumin—each separate

(Continued on next page)

U.S.I. Offers Aid in Insectifuge Formulation

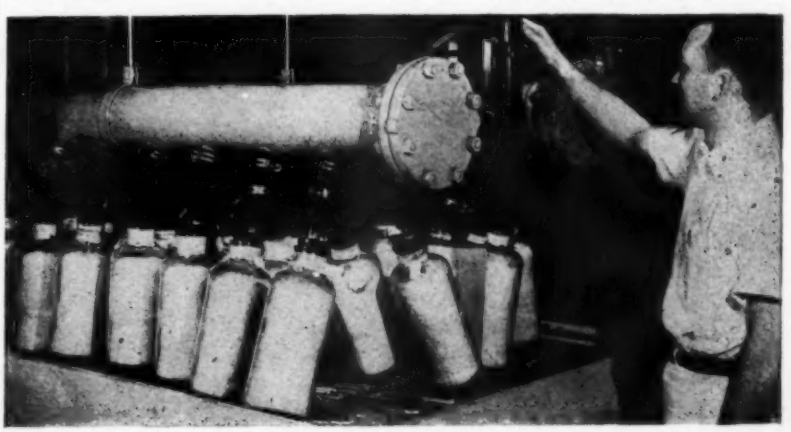
Indalone Continues Available for Civilian End Products

Following up its recent announcement of the availability of Indalone for civilian use, U. S. Industrial Chemicals Inc., is now offering technical assistance to companies interested in the manufacture of insect repellents. Significant progress in the field of insectifuges has been made as a result of the war and the necessity for carrying the fight to the enemy in many insect-infested areas. In its intensified research on a wide range of insectifuge products, U.S.I. has acquired "know-how" that should prove valuable to producers of insectifuges, suntan lotions and similar products in which it is desired to incorporate insect-repellent properties.

War Use

The war-time scarcity of Indalone has resulted from the tremendously stepped up demands of our Armed Forces. In the tropics, Indalone has rendered yeoman service in the fight against malaria. On practically every front, it has had a part in minimizing the insect menace that can have such serious effects on troop morale and fighting efficiency.

Indalone is a highly effective all-round repellent. It is easy to apply and its effect is long lasting. Indalone has some light-screening properties of its own and can also be combined with other light screening chemicals such as U.S.I.'s BK-5.



Dehydrating a protein fraction of blood at the Upjohn Laboratories. This is done from the shell-frozen state, under vacuum.

ADVERTISEMENT—*This entire page is a paid advertisement.*

August ★ **U.S.I. CHEMICAL NEWS** ★ 1945

Ethanol—Water Fractionating

(*Continued from preceding page*)

from plasma at a different ethanol-water proportion and at a different decreased temperature. For instance, the gamma globulin, which carries with it the immunizing anti-bodies separates from 20% ethanol-water solution at O C. Thus the desired protein fraction may be removed by the proper adjustment of solution and temperature, with minimum contamination from undesired protein fractions.

Shell-freezing Dehydration

For special uses, a dehydrated immune serum may be among the postwar developments. While it would require re-constituting with pyrogen-free water, it would enjoy certain advantages of stability and storability over the usual liquid serums.

Here the shell-freezing method of dehydration, put to large-scale use in blood plasma and penicillin processing, would come into use. This dehydration method takes advantage of the same principle which causes washing to dry faster when frozen on the line than it does in the summer. The substance to be dehydrated, whether plasma, penicillin or immune serum, is frozen at a temperature of about minus 25 C in a bath of ethanol and dry ice. Constant rotation of the bottles while freezing causes a shell of frozen material to form on the inside of the bottle.

Following shell-freezing, the dehydration takes place in a room where the temperature is maintained at a level low enough so that the shell remains frozen while a vacuum pump sucks the moisture from it. Vapor removed from the frozen shell is passed over a block of dry ice so that the moisture will condense on it and avoid formation of frost inside the vacuum pumps.

Other New Products

Uses are being developed for the other protein fractions of blood separated by ethanol-water fractionating. From fibrinogen, fibrin foam has been developed as a hemostatic agent to control bleeding. Fibrin films and plastics suggest many surgical uses. Gamma globulin, remaining after the separation of serum albumin from human blood serum, is finding use in the prevention and treatment of measles. Another fraction is used in the treatment of burns.

Any industry which works with proteins (for example, the adhesives industry) may discover ways to use this new ethanol-water fractionating at reduced temperatures.

Water-Repellent Fabrics Are Permanent, Washable

A newly patented process promises water-repellent fabrics which not only are soft and full fabrics, but washable ones as well. Described as permanent, this new finish for application to textiles is essentially a mixture of butanol-reacted melamine-aldehyde condensation product and a salt of an alkoxypropylamine.

In one method of preparation of the new finish, 3-N-octadecoxypropionitrile was hydrogenated at 110 C under a pressure of 800 to 1200 lbs. per sq. in. in the presence of a Raney nickel catalyst. The resulting product was largely converted into a secondary amine by the application of heat. This was dissolved in a solution of the butyl reaction product of tetramethylol melamine and a mixture of butyl alcohol and xylene.

Addition of water in sufficient quantities resulted in a fluid emulsion of the oil-in-water type. At 67 deg. F this emulsion becomes a paste which is diluted with several times its volume of water, and used as a fabric finish. The finish is cured by subjecting it to a temperature of 285 F for approximately four minutes.

At Lederle's Pearl River laboratories, plasma is dried using the principle that makes frozen wash dry faster. The first step, shown above, is to freeze a shell of plasma on the inside of the bottle by revolving the bottle in a bath of ethanol and dry ice. (Temperature, —70 C.)

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

A new resin adhesive is described as a fast-setting, solvent-free, synthetic resin emulsion which not only acts as an adhesive for a wide range of materials, but also serves as a water-proof label overcoating. **(No. 963)**

USI

A zinc chromate replacement, said to be an excellent and inexpensive alternate for scarce zinc chromate, is described as a slate-gray graphitic muscovite compound found in mica crystals. **(No. 964)**

USI

Lacquer-removing cleansing cream, said to be free from toxic or explosive solvents is described as being for after-work application, and as making the use of masking creams unnecessary. **(No. 965)**

USI

A new germicide, for use in soap manufacture, is claimed to be effective against staphlococcus, and to be non-toxic and non-irritating. Product is said to be able to permanently reduce bacterial flora on the skin. **(No. 966)**

USI

To determine strain in plastics, a polarizer is described as being small, light-weight, simple in construction and easy to use. **(No. 967)**

USI

A new anhydride intermediate and compounding chemical, in which all four hydrogens in the phthalic anhydride molecule have been displaced by chlorine, is described as being a free-flowing, white, non-hygroscopic powder that melts at 254-255 C. As it is said to be non-toxic, it is recommended for pharmaceuticals as well as esters, plasticizers, coatings and so forth. **(No. 968)**

USI

A synthetic rubber cement, described as being about ⅓ stronger than cement made from natural rubber, is offered. **(No. 969)**

USI

Higher wet strength is claimed for glassine packaging papers produced by a new resin-impregnating process. These papers are available plain, laminated, waxed or lacquered. **(No. 970)**

USI

A new cellulose-acetate molding material is said to be flame-resistant, odorless, colorable, humidity resistant, and tough; it is recommended for injection molding. **(No. 971)**

USI

A new antiseptic, stated to be many times more potent than available sulfonamides is now offered in small quantities for experimental use. Product is said to be non-staining, effective in the presence of pus, and to have a wide bacterial spectrum. **(No. 972)**

USI

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Butanol (Normal Butyl Alcohol)
Fusel Oil—Refined
Ethanol (Ethyl Alcohol)
Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof, C.P. 96%, Absolute
*Super Pyro Anti-freeze
*Solox Proprietary Solvent
***ANSOLS**
Ansol M
Ansol PR

ACETIC ESTERS
Amyl Acetate
Butyl Acetate
Ethyl Acetate
OXALIC ESTERS
Dibutyl Oxalate
Diethyl Oxalate
PHTHALIC ESTERS
Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate
OTHER ESTERS
*Diatol
Diethyl Carbonate
Ethyl Chloroformate
Ethyl Formate

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-anisidide
Acetoacet-ortho-chloranilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloranilide
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Sodium Oxalacetate
ETHERS
Ethyl Ether
Ethyl Ether Absolute—A.C.S.
FEED CONCENTRATES
*Curbay B-G
*Curbay Special Liquid
*Vacatone 40

ACETONE
Chemically Pure
RESINS
S&W Ester Gums—all types
S&W Congo Gums—raw, fused & esterified
S&W *Aroplaz—alkyds and allied materials
S&W *Arofene—pure phenolics
S&W *Arochem—modified types
S&W Natural Resins—all standard grades
OTHER PRODUCTS
Collodions
Ethylene Glycol
Nitrocellulose Solutions
Ethylene
*Indalone
Urethan

*Registered Trade Mark

Sanders-Eavenson Chemical Co.

James W. Sanders and Marvin S. Eavenson have announced the formation of the Sanders-Eavenson Chemical Co. with offices at 55 Liberty St., New York. The company will produce "Sandev" specialty products, offer a line of general chemicals and act as distributors for nationally known lines of products for the leather, paper, food and beverage, textile, metal cleaning, rubber, laundry, dry cleaning and hospital trades.

Mr. Eavenson was formerly with J. Eavenson & Sons, Camden, N. J., where he served as sales manager and later as factory manager after this organization had been sold to Wilson & Co., Inc. In 1924 he organized the industrial soap department for Colgate & Co., acting as sales manager up to the time of the merger of Colgate & Co. with the Palmolive Peet Co. He served as eastern territorial manager for the merged companies until 1940 when he left to organize Division "H" of the National Oil Products Co. He then became Chicago manager of Wyandotte Chemicals Co.

Mr. Sanders for many years headed the J. W. Sanders Co., mill representatives for various iron and steel products. He later was a partner in the Wall street firm of Diefendorf, Sanders and Ward. During the war period he has been manufacturing plastic enclosures for aeroplanes, being part owner and executive vice-president and sales manager of Plastic Moulding Corp.

Organizes Woodland Toiletries

Woodland Toiletries has been organized by Arthur Hershey with offices at 100 Gold St., New York. Mr. Hershey was formerly vice-president of Matthew Products. The new firm will feature a complete line of pine bath preparations.

Biggs Joins Heyden Sales Staff

Heyden Chemical Corp., New York, has appointed E. W. Biggs to its general sales staff. Mr. Biggs will represent the organization in Pennsylvania and western New York State. For the past three years he has been chief of the Aldehyde Unit, Chemicals Bureau, War Production Board, in Washington. Previously to that he was division

E. BIGGS

manager of the Drackett Products Co., Cincinnati, with headquarters in Chicago.

William J. Murray, president of McKesson & Robbins, Inc., chairman of the Drug and Pharmaceutical Division of the Industry Section of the New York County War Finance Committee is congratulated on achieving 212.7 per cent of the division's quota by Frederick W. Gehle, state chairman of the War Finance Committee for New York (left) and James Hill, Jr., president of Sterling Drug Co., chairman of the industry Committee, (right).

Schwartz Joins Cheplin

Frederic N. Schwartz, recently retired from the U. S. Army, has been appointed assistant to the president of Cheplin Laboratories, Inc., Syracuse, N. Y. Mr. Schwartz, who joined the

FREDERIC N. SCHWARTZ

Army as a Captain in the Medical Corps in 1942, advanced to the rank of Lieutenant Colonel and served as Chief of Operations of the Transfusion Branch of the U. S. Army Medical Department, with headquarters in Washington. Previous to his entry in the service he was associated with Bard-Parker Co. He is a native of Huntington, Mass., and a graduate of Syracuse University.

Parke, Davis Advances Johnson

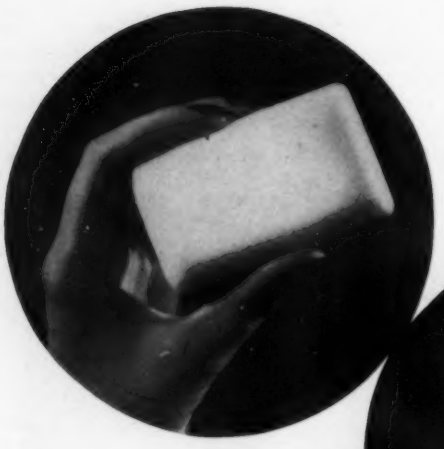
W. L. Johnson has been appointed manager of the Baltimore division of Parke, Davis & Co., Detroit. Mr. Johnson, who has been with Parke, Davis for twenty-six years, succeeds Jones S. Davis who resigned to enter the wholesale drug business in Baton Rouge, La.

Apex Representation in Britain

Stanford L. Hermann, operating vice-president of Apex Chemical Co., Inc., New York and Elizabeth, N. J., has announced that effective August 1, the company will be represented in the United Kingdom by L. Light and Co., Ltd., Old Bowry Laboratories, Wraysbury, Bucks, England. Dr. Henry DeLaszlo, managing director of L. Light and Co., was recently in the United States.

Wholesaler in Ireland

A. W. Magennis, Ltd., 65 Middle Abbey St., Dublin, wholesale distributor to the drug and cosmetic industry in Ireland is interested in representing American companies in Ireland in the post-war period.



for whitest soaps

for most popular scents

COUMARIN MONSANTO

First choice with leading soap and perfume producers for a bouquet that is sure to win and please customers is Coumarin Monsanto.

One of the purest chemicals known, Coumarin Monsanto is used even in the *whitest* soaps. Since it is readily soluble and always uniform in quality, it is easy to blend into your product with consistently good results.

Monsanto was the first American manufacturer of coumarin so that when you specify Coumarin Monsanto you are getting the results of years of research and manufacturing experience. Since many of the raw materials that go into Coumarin Monsanto are also produced by Monsanto under Monsanto's traditionally strict laboratory control, you have double assurance of uniformly high quality in every shipment you receive.

For technical information, samples and prices, write, phone or wire your nearest Monsanto office. Your orders can now be filled promptly. MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 1700 So. Second St., St. Louis 4, Missouri.
District Offices: New York, Chicago, Boston, Detroit, Charlotte, Birmingham, Los Angeles, San Francisco, Seattle, Montreal, Toronto.

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Methyl Salicylate Monsanto
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Please send, without cost or obligation, sample and data on Coumarin Monsanto.

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Company _____

Street _____

City _____ *Zone* ____ *State* _____

Fowler to South Africa

Albro C. Fowler of American Home Products Corp.'s foreign division has left for South Africa and Rhodesia to survey the possibilities of post-war expansion in that area.

American Home Products Corp. now has two subsidiaries in the Union of South Africa—Kolynos S.A. (Pty.) Ltd. and John Wyeth and Bro. S.A. (Pty.) Ltd.

McKesson Offering "Formula 6-12"

In order that vacationists might benefit, McKesson & Robbins, Inc., arranged to express to its 67 wholesale drug houses the supply of "Formula 6-12" released for civilian use. This is an insect repellent which the Army has used successfully in South Pacific jungles. It is said to give protection against mosquitoes for several hours.

Rumford Chemical Clambake

The annual clambake of Rumford Chemical Works, Rumford, R. I., July 27, was featured by the presentation of service pins to 203 men and women. Longest in length of service were Christopher Cuto who received a 60-year pin and Fred L. Thayer who has a continuous record of over 55 years. Four 45-year pins and nine 40-year pins were awarded and Albert E. Marshall, president since 1938, received a 5-year pin.

Chemical Salesmen's Golf

The Salesmen's Association of the American Chemical Industry, Inc., held a golf tournament August 7 at Bonnie Briar Country Club, Larchmont, N. Y.

Stokes Defends Vacuum Patent

The litigation between F. J. Stokes Machine Co., Philadelphia engineers and manufacturers of high vacuum processing equipment, and National Research Corp., Boston, in which Stokes charged National with infringement of patent No. 2,278,195 has been terminated by the entry of a consent decree in which it is held that the patent is valid and has been infringed by National Research Corp.

Theodore M. Hanlon

Theodore M. Hanlon died at his home in Elizabeth, N. J., on July 18, after a long illness. Mr. Hanlon had been connected with the Caron Corp., New York, since 1926 as New York sales representative.

George W. Raiziss

Dr. George W. Raiziss, director of the dermatological research division of Abbott Laboratories, died in Atlantic City, July 16. He was sixty-one years old.

He was born in Odessa, Russia, and received his education in the universities at Odessa, Leipzig, Berlin, Bern, and Freiburg. In 1914 he joined the staff of the Dermatological Research Laboratories, a research institution founded by philanthropic grant for the study of psoriasis. Forseeing that, as a result of the war, America might soon face a critical shortage of arsphenamine, then produced exclusively in Germany, D-R-L undertook to discover the complicated processes by which the drug was manufactured. Under Dr. Raiziss' direction this extremely difficult task was completed by the spring of 1915. After America's entry into the war, D-R-L became virtually the sole American source of supply for the Army, Navy, Public Health Service and civilian physicians.

DR. GEORGE W. RAIZISS

When the Dermatological Research Laboratories were merged with Abbott Laboratories in 1922 Dr. Raiziss became director. He had been a professor of chemotherapy at the University of Pennsylvania Graduate School of Medicine since 1918 and a member of the board of directors of Abbott Laboratories since 1922.

William A. R. Welcke

William A. R. Welcke, first vice-president and treasurer of Fritzsche Brothers, Inc., New York, died at his home in Mount Vernon, N. Y., July 13. He was seventy-five years old. On September 7, he would have completed sixty years of service with Fritzsche Brothers.

When he went to work for the firm at the age of fifteen it was relatively small. Mr. Welcke saw it grow to its present size and took an increasingly active part in its growth. At the time of his death in addition to being vice-president

WILLIAM A. R. WELCKE

and treasurer of the company, he was a member of the board of directors.

Early this year he was honored by being made a member of the Knights of Malta, one of the highest distinctions attainable by a Catholic layman in this country.

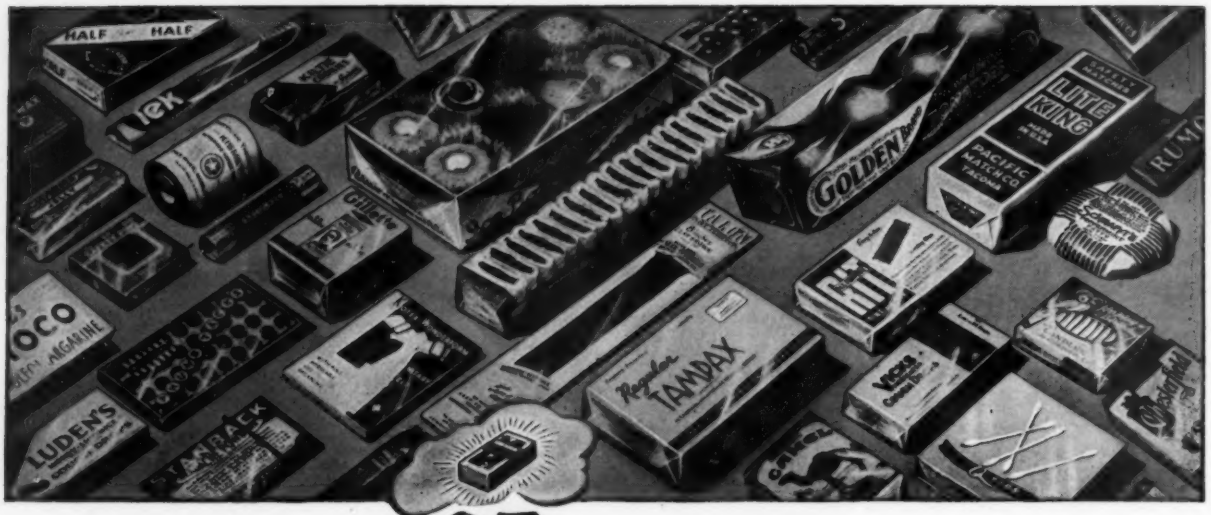
Dr. George A. Harrop, Jr.

Dr. George A. Harrop Jr., director of research at the Squibb Institute for Medical Research, New Brunswick, N. J., and vice-president and director of research of E. R. Squibb & Sons, died August 4 of a heart ailment. He was fifty-four years old and made his home in Princeton, N. J.

Dr. Harrop left Johns Hopkins University where he was an associate professor of medicine to become director of research when the institute was founded in 1938. He was made a vice-president of E. R. Squibb & Sons in 1943.

He was born in Peru, Ill., and attended the University of Wisconisn and later Harvard University, from which he was graduated in 1912. He received his M.D. degree from Johns Hopkins in 1916 and interned there. In 1920 and 1921 he did research at the University of Copenhagen, returning to this country to become an instructor in medicine and resident physician at Columbia University where he remained until 1923. He was associate professor of medicine, Pekin University Medical College, China, 1923-24.

From 1925 to 1938 Dr. Harrop was associate professor of medicine at Johns Hopkins where he was in charge of the chemical laboratory and the work in diseases of metabolism and endocrinology.



It's our job to make Packaging Dreams come true

In planning to improve your package, or in seeking lower costs, we believe it will pay you to consult us. For we can give you the benefit of exceptionally broad experience gained in serving America's leading manufacturers.

Many modern improvements in packaging have been made practical for volume production by our machines. Cellophane is a good example. When introduced, the use of this sales-attracting material was limited to products wrapped by hand; no machine then available could handle it. We met this need in short order with cellophane wrapping machines that were quickly installed by manufacturers of cigarettes, candy, food, drugs, etc. . . . Today, our engineers are likewise busy adapting our machines to the many new wrapping materials recently developed—*materials which will play an important part in postwar packaging improvements.*

The easy-opening device, that enables you to zip the wrapper off a package without fumbling, is another development pioneered by us, and one which will be used increasingly for many types of packages.

Printed material in roll form, which makes notable savings over the cost of cut-to-size sheets, is now going on many products, thanks to our perfection of the electric eye registering device. And the dream of having one machine wrap several different sizes of packages has been realized by many a manufacturer through the use of our *quickly adjustable* wrapping machines.

Over thirty years of pioneering finds us today with the largest and most widely used line of wrapping machines in the country.

Write for our booklet "Sales Winning Packages"

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18 Dickens Ave., Toronto 8

PACKAGE MACHINERY COMPANY
Over a Quarter Billion Packages per day are wrapped on our Machines

Production Forum

By Francis Chilson

Industrial Consultant

Palleting

There is no doubt but that the pallet system of handling materials about which we have, over the years written so much, will be the most widely used system of moving materials after the war. The pallet is a very simple unit. Manufacturers equipped with pallet trucks can arrange with suppliers of bottles and jars, etc., to palletize entire box cars or trucks at the factory. When this is done, the time of unloading a box car is reduced to a very few minutes.

The Army and the Navy have been doing this and the degree to which the economy of the pallet system has demonstrated itself is indicated by the fact that until recently, you could not even get a gasoline operated fork truck, and I still don't think you can get a battery operated fork truck. The output of all manufacturers of all such equipment was commandeered by the Armed Forces.

After the war, when you can receive materials of all kinds already loaded on pallets—each pallet being strapped so that the unit load cannot shift in transit—your handling costs will drop to a minimum. The cost of the pallets can be met in several ways. Carload shippers can accumulate them until they have a car load and then return them to the supplier, otherwise he can use them throughout his own plant. If the pallets are made of scrap lumber, the cost will be so negligible that in some cases they can be discarded altogether.

It is significant also that the experience of the Army and the Navy in moving vast quantities of materials not only demonstrates the value of the palletized unit load, but by virtue of the long one story warehouses the Armed Forces have constructed, the value of single story construction has been demonstrated as well. I have seen many Army depots and where ever it has been necessary for them to construct new warehouses, they have always been single story jobs, even though the buildings are in some cases almost a mile long.

Yet it is interesting, in spite of the evidence, that you will still meet people whose minds are closed on the subject. Recently a warehouse man told me that pallet loading and pallet stacking was a cock-eyed idea and he "ought to know since he had had 25 years of experience in warehousing." Some people, of course, never agree to consider anything new simply because they do not understand it—or do not really understand their own problems.

I find, in discussing material handling and the relation of building construction to this fundamental operation, that most people arrive at the wrong conclusion simply because they have failed to analyze their problems sufficiently.

Handling materials is one subject which is open to the most critical analysis. You can observe the various systems in operation, you can get comparative costs, you don't have to take anybody's say so.

Selecting The Right Labeler

Sidney T. Carter, chief engineer, Economic Machinery Co., Worcester, Mass., has this to say on the subject of selecting the right labeler:

"Those of us who design and build labeling machinery naturally have an opportunity to study a large number of labeling jobs covering almost every conceivable variation in production, container size and shape, label size and shape, and operating conditions. As a result of this experience we have learned that many of the troubles encountered with labeling are the result of lack of understanding of the requirements, and the equipment best suited to meet them, or of changes in production which render existing methods and equipment inadequate or unsuitable.

"The purpose of this article is, therefore, to describe the various types of labelers, their qualifications and limitations, and to touch upon the other factors affecting labeling, so that the producer of labeled goods may have a clearer understanding of the possibilities and may consequently avoid unnecessary labeling headaches.

"The labeling of drug and cosmetic products differs somewhat from that of other bottled goods in that there is likely to be a wider variety of container and label sizes and shapes and the attractiveness and neatness of the labeling is a much more important factor in the sale of the product than is the case with many other

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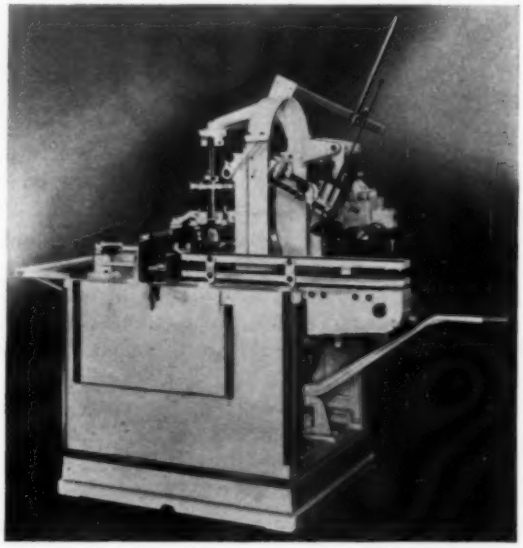
products. That makes it all the more important to select the labeling equipment with extra care.

"Most manufacturers of this kind of products have their first experience with the semi-automatic type of Labeler since this type has the versatility and capacity to take care of labeling needs until volume of output becomes moderately large. With this type of Labeler the operator places each container in position. One or more labels are applied and the operator removes the labeled container.

"The semi-automatic labeler is readily adjusted to label any size bottle from ampoules up to and including gallon bottles or jugs. Change-ovèrs are quickly made, so that for those having relatively short runs of any given container size and shape the Semi-Automatic Labeler is most efficient and economical. Average production may be figured at about 40 labeled bottles a minute.



"Full automatic labelers are, of course, called for when the sustained volume of output is such as to exceed the capacity of semi-automatic labelers or when use of the latter involves an excessive amount operating attention. The modern automatic labeler has been designed for ready adaptability as well as high production and offers no obstacles to the manufacturer of a variety of items involving different shapes or sizes of containers and labels.

"One relatively recent development in automatic labeling that is proving exceptionally well suited to the requirements of many pharmaceutical and cosmetic houses is the Turret Labeler, so named because of its ingenious turret construction which makes for unusual compactness and simplicity as well as high efficiency. The turret labeler applies body labels—and neck labels and foil if desired—to all shapes and sizes of bottles, smooth, fluted or fancy, from 6 oz. to quarts. It has a patent sliding picker arrangement that gums the entire label surface or any portion of it. This means firm, neat label application.

"From the time the bottle enters the turret until it passes to the discharge conveyor it is under positive and constant control. This means precise label placement and prevents leakage. Production jams or interruptions are automatically avoided by appropriate safety devices. Conveyors are built into the labeler and operated by the same motor with variable speed drive. The turret labeler may be recommended for high quality labeling at moderate cost. It turns out about seventy bottles a minute. For those requiring greater production there is a twin turret labeler having all of the advantages of the single turret machine and offering production capacity of around one hundred and thirty-five bottles a minute.

"Perhaps the most widely used labeler in the larger establishments is the full automatic "Bee-Line" labeler, which gets its name from the fact that the bottles move in a straight line through the entire operation without detours, collisions, jarring or jamming. This smooth, gentle, quiet bee-line action is popular with both management and operator. It is ideal for safe conduct of the modern light weight glass containers. Back labels as well as front labels may be applied simultaneously if a Bee-Line labeler is specified for this purpose. Neck labels may also be applied in the same operation.

"Depending, as is the case with all labelers, on the type and variety of bottles and labels, the Bee-Line labeler produces some sixty-five labeled bottles a minute. For high production, the Bee-Line is equipped with twin labeling stations which double the output while operating at the same efficient labeling speed as the single station unit.

"There is likewise a Bee-Line labeler designed especially for gallon and half gallon wine jugs and bottles. This labeler handles containers from 3½ to 8 inches across and up to 15 inches high at a production rate of 40 to 50 per minute. Labels are correctly positioned in relation to jug handles and these heavy containers are put through as smoothly and safely as the lighter sizes.

"Given the proper labeler for your individual needs there are but few additional factors in continuously successful labeling. The label itself needs to be secured from an experienced supplier who knows the paper and printing requirements for satisfactory label application; or the label may be submitted to the maker of the Labeler for approval or suggestions. Often a minor change in label size, shape or construction transforms a difficult to an easy application.

"The use of the proper adhesive is, of course, important. Again the use of an experienced supplier will obviate future difficulties. When changes in label supply or method of labeling are contemplated, the supplier of adhesive should be consulted to make sure that changed requirements will be adequately met. Changes of any of the standards—container, label, production, etc.—on which the Labeler was set up to operate should be carefully taken into account. Labelers are designed to be flexible enough to take care of ordinary variations in container size and con-

tour but major changes in operating conditions should be checked with the Labeler manufacturer before assuming that they will not affect the quality and performance of the labeling operation. Even the atmosphere may affect a precision operation such as labeling. If changes in temperature or humidity appear to affect labeling performance it is well to consult the Labeler manufacturer for recommendations.

"As is true of so much of our production machinery in this age of mechanical development and progress, changes and improvements often render long established methods and machines out of date or obsolete however satisfactory or trouble-free they may appear. There is only one best Labeler set-up for you, and that is the one that will assure the quality, uniformity and capacity for your product at the lowest overall cost, labor, operation and maintenance included. The manufacturer who specializes in Labelers stands ready to render you every assistance in meeting this objective."

Heat Sealer

The Codie-Kay Company announces a new packaging machine, the C-K Heat Sealer, a rotary-type, crimp heat-sealer that seals cellophane, plastic-treated bag caps and all similar heat-sealing materials. Fastened to a bench or table it can be fed by hand or conveyor. Raising or lowering is accomplished by a hand operated screw feed to accommodate bag sizes from 1½" to 15" in height. A conveniently located dial controls temperatures up to 700°F. All working mechanisms are equipped with precision ball bearings. Brass rollers are in perfect alignment (within .001 inch), and are adjustable to any thickness. There are no brushes or commutator to wear out. All moving parts, belts and pulleys are safely guarded.

Speed of 240 lineal inches per minute, seals bags as fast as they can be fed. The C-K Heat Sealer operates on 110 volt alternating current. The time-saving feature of this machine: no maintenance is required to set or regulate heat, width of rollers, height, etc. Any operator (man or woman) can make all necessary adjustments. Codie-Kay Company, 1139 San Julian Street, Los Angeles 15, California.

Ultraviolet as a Protective Agent in Preparation of Pharmaceuticals

A. R. Dennington, sterilamp specialist, Westinghouse Electric and Manufacturing Co., prepared the following paper for the Western Section of the American Pharmaceutical Manufacturers' Association:

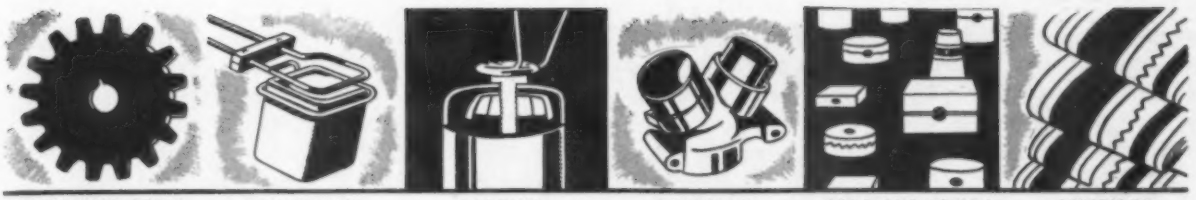
"Pharmaceutical preparations require the greatest care and the most modern equipment if they are to be manufactured in commercial quantities and made ready for market in aseptic condition.

"The combined efforts of the engineers, physicists, chemists and medical personnel are required to complete a product or group of products which are of the high degree of purity essential for creating the desired reaction without toxic or infectious results.

"A rigid routine of sterilizing containers and thoroughly cleaning rooms, laboratories, tables, and equipment has been, for years, standard practice in all pharmaceutical establishments. One source of contamination, the air surrounding the work or the product, has not been treated to remove bacteria because until recently there has been no treatment possible. Within the past few years there has been developed a simple, reliable source of bactericidal ultraviolet radiation, called the Sterilamp, which can be installed and operated at low cost, thus the air can be cleared almost completely of bacteria and mold and other living organisms so that it no longer is a contaminating agent. It is possible, therefore, to provide an additional safeguard in the manufacture or packaging of a product which is exposed to the air, and which subsequently cannot be autoclaved.

"During the past two years, there has been rather widespread and rapid increase in the number of ultraviolet lamps in pharmaceutical laboratories, but this increase was preceded by an extended period when large manufacturers worked with and tested various ultraviolet generators to determine their effectiveness. These tests indicated beyond question that bactericidal radiation provided a safeguard against infection of products and cross infection of test animals which more than justified the extensive use of ultraviolet generating units in practically every part of manufacturing establishments and biological laboratories. As a result, the number and variety of bactericidal ultraviolet applications has been increased until several pharmaceutical establishments have from 200 to 500 Sterilamps in continuous service. These ultraviolet generators provide a relatively high percentage of radiated output in the region of 2537 Angstrom Units, which is as close as can be obtained practically to the most effective bactericidal wavelength of 2600 Angstroms. More than 95 per cent of the ultraviolet total radiation provided by the lamp is at approximately 2537 Angstrom Units.

"Short wave lengths, such as 2537 Angstroms and shorter, have very little penetration into liquids or solids. Clear water with only a small amount of dissolved minerals permits the rays to penetrate to appreciable depth, there being about 50 per cent absorption in a three inch depth of physiological salt solution and the same amount in a six inch depth of distilled water. Solutions containing proteins are nearly opaque to these short rays while clear window glass or optical glass affords complete shielding from them. Because of the lack of penetration these bactericidal rays can be used to protect culture media from air borne contamination without endangering the cultures which may be exposed in the process. Penetration of these rays through air is very good, however, as tests show effective killing of organisms on the surface of culture media on petri plates placed more than fifteen feet from an ultraviolet source shielded to have only one inch of effective length. In fact a definite quantity of the weak radiation over a period of several hours was more effective in killing micro-organisms than the same amount of more intense radiation for the same period of time. This increase in lethal effect is explained by



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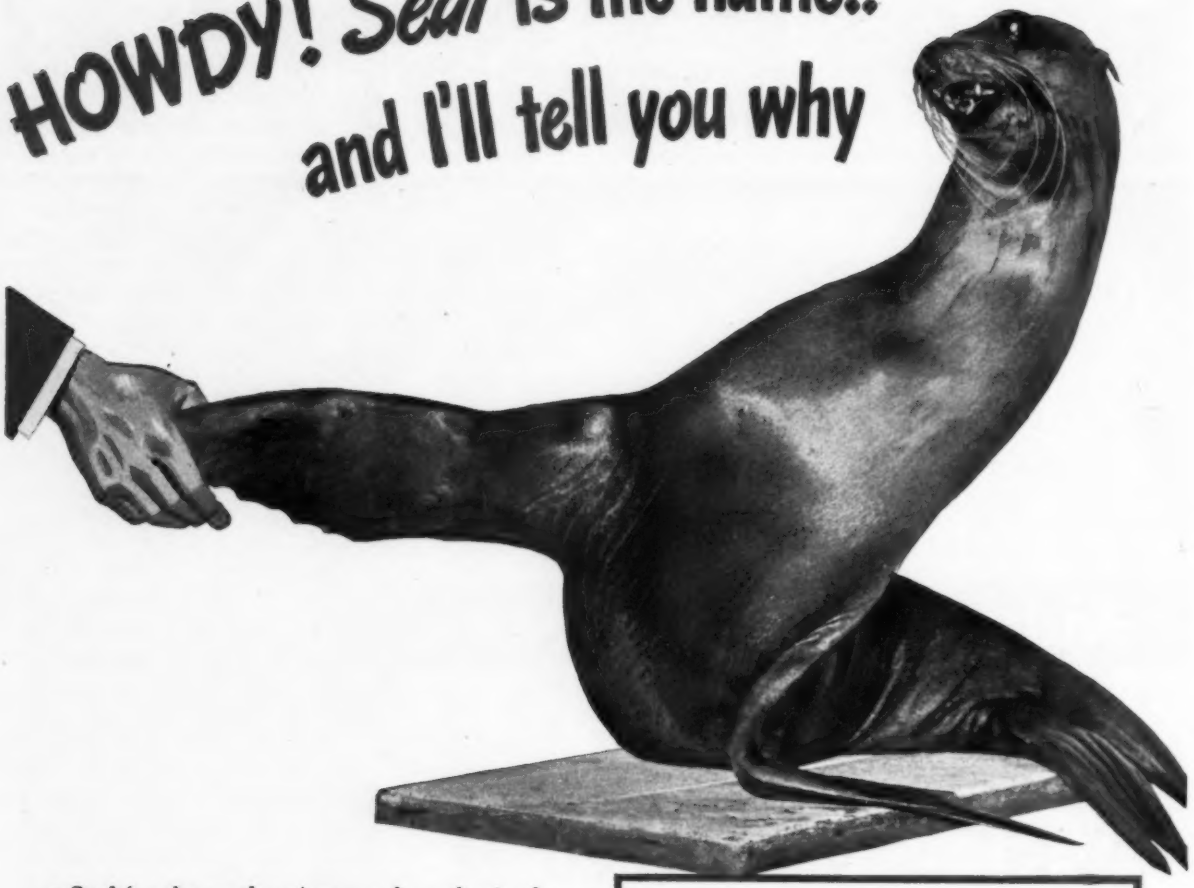
HOWDY! *Seal* is the name.. and I'll tell you why



• *Seal* (as shown above) comes from the Anglo-Saxon *seolh*.

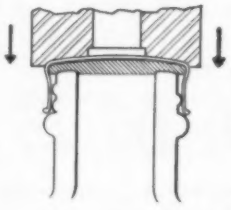
Seal (as shown at the right) comes from Alseco's belief that *cap* or *closure* doesn't fully describe it.

Cap means "a covering for the top end of a thing". And *closure* . . . well, a door or a gate is a closure . . . "that which closes or shuts".

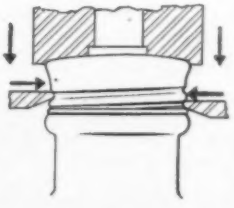
But *seal* means "that which seals or secures; pledge; guaranty; security".

That's what you want more than anything else ...security for your product. That's what Alseco can give you with Alseco Rolled-On *Seals*.

WHY ALSECO R-O SEALS SEAL BETTER



1. Plain-skirted Alseco Seal is seated squarely on container. Under stationary top pressure, container lip is embedded in cap liner evenly all around, effecting the seal.



2. While the seal is thus held under pressure, threads are Rolled-On to conform exactly with threads on container. Each seal is tailormade, fits perfectly, seals tighter.

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assuming that bacteria are more easily killed at some instant in their life cycle therefore, by extending the radiation time, advantage is taken of this weakness.

"Every laboratory in a pharmaceutical establishment should be equipped with bactericidal radiation as a protection to the workers as well as to the materials being handled. The culturing of pathogenic organisms in order to develop methods of control and the testing of these cultures and controls on animals involves some risk of the organism contaminating the air and affecting those working in the rooms. Where bactericidal radiation is used, this danger is greatly reduced. Many tests which have been made by Dr. Harvey C. Rentschler, Director of Research for the Westinghouse Lamp Division, indicate that most pathogenic organisms are killed by about half the quantity of bactericidal radiation required for killing B subtilis spores. For example, oberthella typhosa requires 20 to 30 clicks and bacillis anthracis requires 30 to 50 clicks for about 95 per cent kill while subtilis spores require 50 to 65 clicks. One click on a standard Rentschler meter represents 220 microwatt seconds per square centimeter. In the E. R. Squibb laboratories each step in the preparation of blood plasma is protected by ultraviolet, beginning with the refrigerated receiving room where the bottled blood from the Red Cross stations is received and stored until it can be processed. As the temperature is maintained at 350° F., the workers wear protective clothing while removing the bottles from the refrigerated shipping containers and checking them before storing on the shelves.

"Where serums are filtered, the material is exposed for an appreciable time to the air of the room and it is very important to have the air free from organisms, hence, ultraviolet radiation from Sterilamps is provided. These lamps are mounted at the same height as the twelve fluorescent lighting fixtures and spaced between them to give uniformity of radiation. This arrangement also prevents either the lighting units or the ultraviolet lamps being shaded by or interfering with the others. The radiation is directed into the lower part of the room where the need of protection is greatest. It has been the experience in pharmaceutical laboratories that with ultraviolet radiation in the working areas, the precautions usually taken to prevent contamination of the products yield more positive results than were obtainable without air sanitization. The insurance factor has thus been a valuable aid in protecting that priceless ingredient, the reputation of the manufacturer.

"In a typical laboratory where work may be performed at a bench or at any other part of the room, general radiation should be provided. It should be noted that tinted or colored glasses or shields are not required for the workers as any ordinary clear glass is opaque to the ultraviolet radiation and hence affords complete protection to the eye. Most transparent plastic shields give the protection required although a few plastics have sufficient transmission of ultraviolet to render them unsuitable as eye protectors.

"Areas in which vaccines or other products are sealed aseptically in glass tubes must be carefully protected from air-borne organisms. Usually the ampoule filling and sealing is done behind a glass shield which allows the worker to see the operation but which deflects the breath away from the work. An increased measure of safety to the product can be obtained by placing Sterilamps back of the glass shield and about two feet above the table top. The bactericidal radiations are of sufficient intensity at the point where the sealing is done to kill or inactivate most micro-organisms within a few seconds. There is little chance that any living organism will survive the barrage of ultraviolet rays long enough to float into an ampoule. Sutures are handled in essentially the same way as ampoules containing vaccines and may be protected by ultraviolet radiation in the same manner. General radiation in the suture processing rooms aids in maintaining aseptic conditions and insuring a sterile product.

"In transferring organisms from one culture medium to another, there is always the chance that air-borne bacteria will contaminate the new culture. Where this work is done at tables protected by glass shields, it is advisable to install ultraviolet generators back of the shields as suggested for ampoule protection. If no shields are used, it is usually necessary to install ultraviolet lamps on the ceiling of the room and to depend upon general irradiation to prevent accidental infection of cultures. In either type of installation there is no danger of killing or inactivating the culture being transferred because the bactericidal rays of ultraviolet have practically no penetration into the cultures or media. Thus, only a minute surface layer of organisms are affected by the rays but organisms floating in the air are fully exposed to the radiation and are killed.

"The extreme sensitivity of the materials and processes in the production of penicillin to infection by air-borne organisms has caused practically all manufacturers to use the Sterilamps as an added prophylactic agent. Whenever air can come in contact with the culture materials, the air in the incubation room and the air supplied to the culture in the tank method, ultraviolet radiation stands guard to keep out unwanted organisms. In the packaging room, where the completed product is placed in the final containers, radiation completes the guard set up to prevent contamination.

"As glass containers are very largely used in packaging pharmaceutical products and as these containers are practically always for single use, ultraviolet radiation permits the containers, either bottles or jars, to be supplied to the manufacturer in practically sterile condition. The Brockway Glass Co. makes use of the fact that as the bottle is formed from the molten glass it is at a temperature which makes it impossible for any living organism to be in it. The problem then becomes one of keeping the container from becoming contaminated from the air as it cools and capping it in a germ-free atmosphere before shipment. To accomplish

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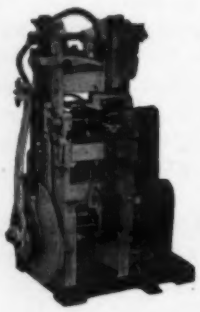

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this the air supplied to the lehr is first passed thru a chamber and irradiated with Sterilamp. This air flows in a direction opposite to the movement of glassware thru the lehr so that the coolest air comes in contact with the coolest bottles. The bottles are delivered to a hooded space equipped with ultraviolet lamps and are closed with caps which have had the interior irradiated. In this way bacteria-free containers can be shipped to the user. These containers in order to maintain the aseptic quality must be opened and filled under ultraviolet radiation.

"For office workers protection against air-borne organisms can be obtained by shielded radiation units of the wall type or pendant type, designed so that direct and strongly reflected radiation is kept out of the occupied area. Shielded radiation of this type is most effective when there is no rapid forced circulation of the air. The fixtures are constructed to allow free radiation of the room above eye level and perhaps a narrow band along the wall below the fixture. Convection currents carry the air upward into the field of radiation where, to a large extent, the organisms are killed or inactivated and the danger of cross-infection correspondingly reduced. Rising or descending air currents along the walls come into the radiated area near the fixtures and receive additional treatment.

"Buildings or rooms supplied with air thru air ducts from an air conditioning or air circulating system present a somewhat different problem. The movement of air thru the room and thru the circulating system tends to build up a high degree of contamination if no radiation is used, since usually fifty to seventy-five per cent of the air is recirculated as is necessary for economy in heating or cooling. By placing a group of Sterilamps in an enlarged section of the main air duct, a high intensity of radiation is built up which will kill practically all the living organisms in the air as it passes the lamps. This treatment insures a supply of air, practically free of germs, to the occupied space and is equivalent to circulating all fresh or germ-free air in the system. A low bacteria count can be maintained and the danger of infection of workers and the product materially reduced. Tests made at the points where air is delivered from the ducts to the room have indicated a reduction of more than 90 per cent in the bacteria entering with the air as compared to the conditions existing when the radiation is not used. It also has been noted that odors are greatly reduced or are eliminated.

"When proper precautions are taken, the installation of Sterilamps in an air duct does not increase the hazard of smoke or fumes being distributed throughout the building. There is no hot filament in the lamp and the temperature of the tube itself and the column of mercury vapor within it is low enough to feel only warm to the touch. The high tension wiring within the duct may be bare copper if a spacing of at least one inch is maintained between the wire and any grounded metal. Non-combustible, non-absorptive insulators are used to support the wire, thus eliminating rubber covering. Inspection windows of clear wired glass permit observation of the lamps. Service doors fitted with switches which cut off the electric power when the doors are opened, allow access to the chamber for cleaning, testing, and replacing lamps without exposing the workman to either high voltage or high intensity radiation.

"Ultraviolet generators are installed in animal rooms of numbers of manufacturers of pharmaceutical products. For example, general irradiation of the rooms where animals used for inoculation tests are kept, in the plant of E. R. Squibb & Sons, Inc., New Brunswick, New Jersey is for the purpose of reducing danger of cross-infection among animals in different cages. Small animals, such as mice, rats, guinea pigs, rabbits, etc. are usually kept in cages which have bars or gratings at the front and openings near the top of sheet metal sides for ventilation and light. Where the construction is such as to prevent direct passage of air from cage to cage, the path of possible air-borne infection is out into the room where there is bactericidal radiation. These rays kill or weaken the bacteria or virus and thus greatly reduce the danger of infection. Studies of inoculations can thus be made with greater certainty than without ultraviolet radiation in the room. Workers in an irradiated room can be protected by eye shields, preferably supplemented by eye shades or caps with visors. This prevents direct or reflected radiation from reaching the eyes and causing temporary but painful conjunctivitis. The eyes of animals being ordinarily more exposed to sunlight than the eyes of humans are not easily affected by bactericidal radiation, and in case of overexposure, recovery is rapid. The continuous reduction of the number of living organisms in the air counteracts, to a great extent, the number which is being added by the exhalations of the animals and the disturbance of the litter in the cages, thus preventing the development of a large population of micro-organisms in the air.

"The larger animals such as horses and cattle, which are used as a source of blood for serums and vaccines, must be kept under the most sanitary conditions possible to insure their continued health and freedom from even temporary infection. In addition to having the most modern equipment and maintaining it in scrupulously clean condition, ultraviolet lamps are installed on the ceiling over the animals for the purpose of sanitizing the air and minimizing odors. Continuous radiation of the air, walls and floor in this section of the building provides a more sanitary environment for the animals than previously has been obtainable. The radiation of the air gives sanitary control to an element which, until the present, could not be given purifying treatment comparable to that which is provided for food and water. The applications of germicidal ultraviolet radiation in pharmaceutical establishments which have been described are general in character. Many special applications will be found for the radiation method of sanitizing air in this industry to permit standards of purity of products exceeding those which have been possible without the safeguard of ultraviolet."

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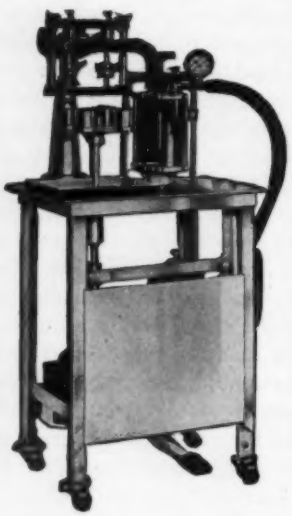

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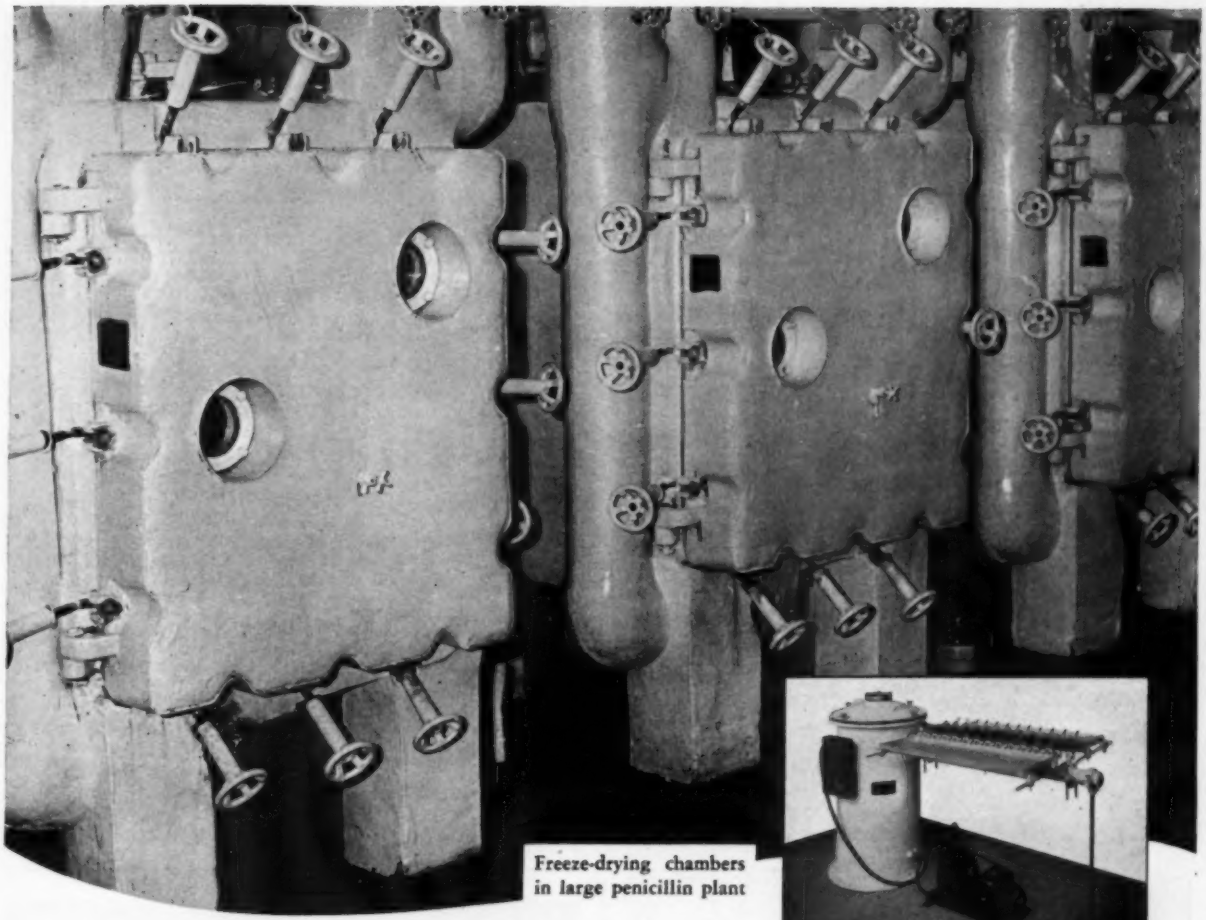

Freeze-drying chambers in large penicillin plant

Hospital-size freeze-drying apparatus

FREEZE-DRYING

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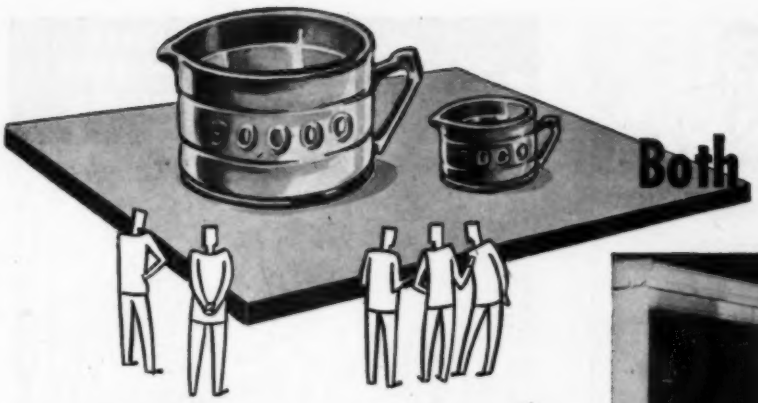

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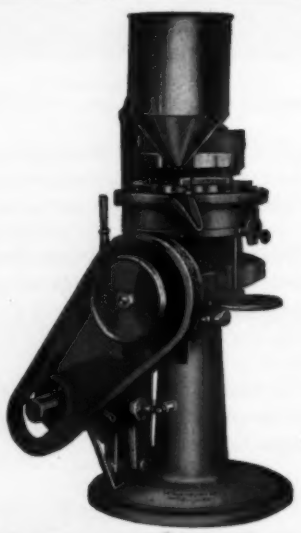

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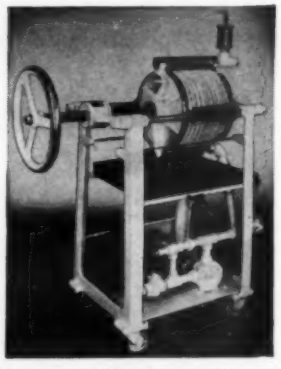

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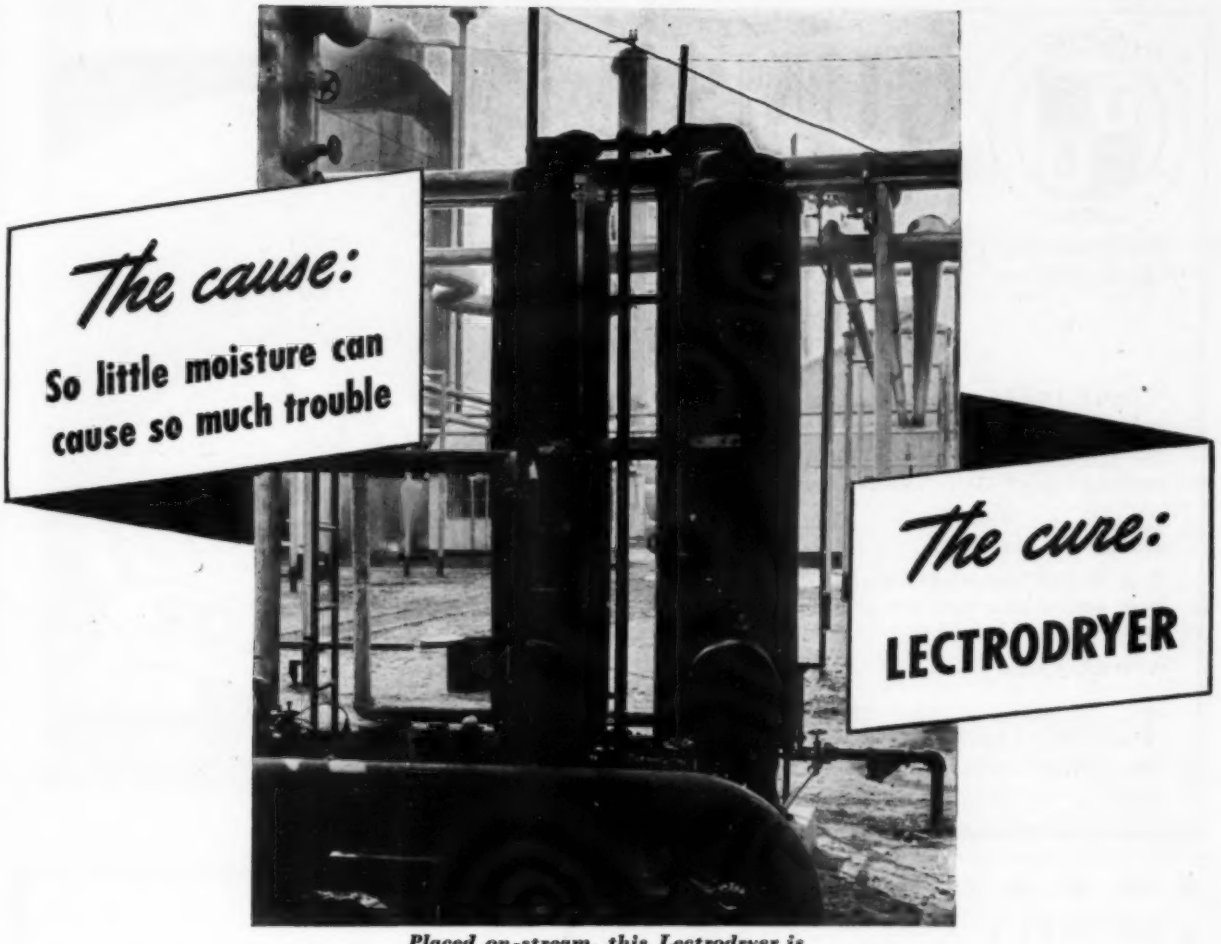

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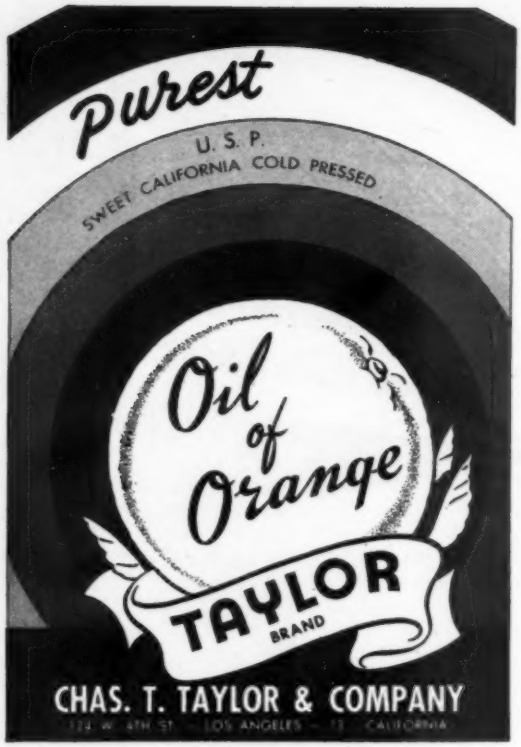

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Industry's Books

The Chemical Formulary, Volume VII, Editor H. Bennett, 474 pp., Chemical Publishing Co., Brooklyn, $6.

Additional new formulae have been gathered to compile a seventh volume of this work. The subjects covered include adhesives, flavors and beverages, cosmetic and drug products, emulsions and colloids, farm and garden specialties, food products, inks and marking substances, skins, leather and fur, lubricants and oils, materials of construction, metals and alloys, paint, varnish, lacquer and other coatings, paper, photography, polishes, pyrotechnics and explosives, plastics, resins, rubber, wax, soaps and cleaners, textiles and fibers, An enlarged directory of sources of chemicals and supplies is included. The book is well indexed for easy reference.

Infrared And Raman Spectra Of Polyatomic Molecules, by Gerhard Herzberg, F.R.S.C., Research Professor of Physics, University of Saskatchewan, 632 pp., D. Van Nostrand Co., New York, $9.50.

This volume represents the continuation of a series on molecular spectra and molecular structure which the author started a number of years ago with a volume on diatomic molecules. Chapters: I—Rotation And Rotation Spectra; II—Vibrations, Vibrational Energy Levels, And Vibrational Eigenfunctions; III—Vibrational Infrared And Raman Spectra; IV—Interaction Of Rotation And Vibration, Rotation-Vibration Spectra; V—Applications.

Cinchona In Java, by Norman Taylor, 87 pp., Illus., Greenberg, New York, $2.50.

This is the dramatic story of quinine and malaria, the most serious disease on earth. Into this fabulous narrative of the extraction of quinine from cinchona bark, the author has woven a story of how nature has provided a remedy for one of nature's worst plagues. How it was done is a tribute to the science of tropical agriculture and especially to the Dutch scientists who did it. The author is well known to this industry as Director of the Cinchona Products Institute in New York.

The Bogey Of Economic Maturity, by George Terborgh, 263 pp., Machinery And Allied Products Institute, Chicago, $3.

Among the motley brood of economic doctrines and dogmas spawned during the great depression of the thirties, none has survived more tenaciously than the theory of economic maturity. Like the Revelation of St. John, this new apoaclypse has its four horsemen: declining population growth; the passing of the frontier; the dearth of great new industries; and the growing importance of depreciation reserves. Together they constitute the body and bones of the theory of economic maturity. Their fateful conjunction in the United States, according to this theory, portends a chronic dearth of opportunity for private investment, hence chronic oversaving, and presages an era of secular stagnation and recurring crises from which there is no escape except through the intervention of government, which must either expand public investment or tax out of existence the excess savings which are poisoning the economy. Mr. Terborgh examines each of the four horsemen in turn. His analysis, buttressed by a wealth of historical evidence and by extensive original research, leaves four disreputable and discredited scarecrows.

Fundamentals Of Pharmacology, by Clinton H. Thienes, M.D., Ph.D., Professor and Head of the Department of Pharmacology, School of Medicine, University of Southern California, 497 pp., Paul B. Hoeber, Inc., New York, $5.75.

All important U.S.P. XII preparations are described, and a sufficient description of physical and chemical properties of drugs is given to facilitate writing prescriptions. The major emphasis of the volume is on dynamics of drug action, and the absorption, distribution, metabolism and excretion of those drugs which form the basis of therapeutics. A special section is devoted to prescription writing, and another to general or cellular pharmacology. Vitamins and hormones used therapeutically are discussed in considerable detail.

Modern Cosmeticology, by Ralph G. Harry, F.R.I.C., Second Ed., 432 pp., Leonard Hill Limited, London, 35s.

Since this work in its First Edition was accorded such a flattering reception, it was only to be expected that a revised edition would be eagerly awaited. This new edition follows the same general lines as its predecessor, stressing the scientific and therapeutic side of cosmetics and is probably the best which has yet appeared on the chemical and physical basis of this subject. Additional chapters added include preparations for babies; feet; insect bites; and acne. Suggested methods of chemical analysis are given, and the choice of suitable dyestuffs and plant for production purposes discussed. The chapter on emulsions has been completely rewritten, and the histological sections have been revised and extended. The book provides not only numerous formulae for all the various cosmetic preparations and technical details of their manufacture, but also a good unbiased account of what these preparations can and cannot do.

What To Do About Vitamins, by Roger J. Williams, 56 pp., University of Oklahoma Press, Norman, $1.

This is a book for laymen written by one of America's most eminent authorities on vitamins and nutrition. In simple, straightforward language, Roger J. Williams, the director of the Biochemical Institute of the University of Texas and the discoverer of panthothenic acid, gives the answers to the hundreds of questions asked him during his many years of research. Dr. Williams' discussion of this important subject offers a succinct and authoritative guide to vitamins and minerals, why they are necessary in the diet, and how they may be secured in wholly adequate amounts. From it, the reader will be able to determine how completely he may be supplied with the sseential vitamins and minerals from various foods, which foods are now inadequate in this respect because of specia' processing, to what extent vitamin supplements may be necessary, and, perhaps most importantly, how to "meter" foods for vitamin and mineral content.

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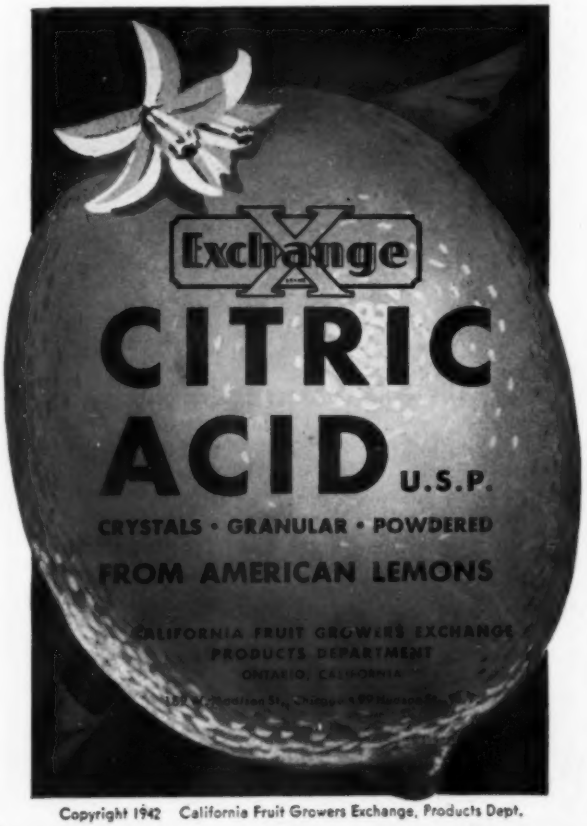

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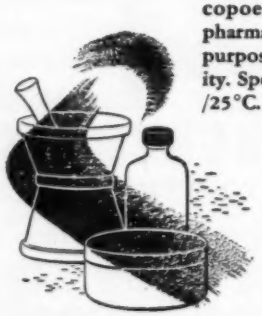

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Podophyllin for Treating Soft Warts

J. V. Macgregor (*Brit. Med. J.* 1:293 1945) has confirmed the value of podophyllin resin in the treatment of soft warts. Using a 25 per cent suspension of the drug in liquid petrolatuum, the mixture is thoroughly shaken and applied liberally to the affected area, care being taken that the numerous crevices of the warts are penetrated. According to Macgregor the treatment is simple and requires no special skill or apparatus, but the application should be thorough and prolonged. It is suitable not only for single soft warts but also for more difficult cases, such as warts of the urinary meatus and multiple warts of the penis, vulva, and anus. In addition multiple warts of the face disappear under this treatment.

Treatment of Vaginal Discharge

Hitherto, notes V. B. Green-Armytage (*Brit. Med. J.* 1:608, 1945), treatment of pathological vaginal discharge has been long and tedious. By recognizing the fact that many of these conditions result from mixed infections he has devised a method that is cheap, quick and almost specific for the treatment of these patients. This consists of inserting a 2-drachm vaginal suppository made up with a glycerogelatin base containing 30 grains each of sulfathiazole and zinc peroxide. In the case of virgins and infants, the size and dosage can be halved or quartered. If there is any, idiosyncrasy to the sulfa drugs, 1 grain of proflavine is substituted. These suppositories are inserted into the vagina on six alternate nights and the patient is douched or douches the following morning with a normal saline or a 0.5 per cent solution of lactic acid. Where possible, the vagina is painted with a 2 per cent solution of gentian violet three days before treatment begins. Follow-up of patients so treated showed few recurrences, and where symptoms do reappear patients at once react favorably to a few days' repetition of the treatment.

Famine Food

According to a note in the *Pharmaceutical Journal* (154:222, 1945) considerable interest has been aroused by the announcement that predigested food consisting of a protein hydrolysate has been distributed to the Dutch and other liberated peoples of Europe. This, so-called "F-food," or predigested diet, contains glucose, amino-acids, and vitamins. It is prepared in two forms: (1) In the form used by intravenous injection a solution of amino-acids is prepared by acid digestion and is supplemented by the addition of tryptophane, which is destroyed during the process. To this solution glucose is added and 2 liters of the product is equivalent to 50 gm. of protein, an amount which is injected daily. (2) The other variety is administered by the mouth and consists of a spray-dried solid obtained by digesting protein (casein and meat) with enzymes resulting in a mixture of amino-acids with simple di- and tri-peptides. To this powder vitamins A, D and C, with thiamine, riboflavine and nicotinic acid are added. For administration the powder, with glucose, is dissolved in water and given by the mouth or by stomach tube. The container is fitted with a scoop which removes about 50 gm., i.e., sufficient for one dose. The instructions are printed in Dutch or other appropriate language.

Red Cells as Surgical Dressings

As a result of the increased demand for plasma, blood banks have been left with large quantities of erethrocytes. Hitherto discarded, this has resulted in a 50 percent loss of the total material collected. Attempts to utilize this material have resulted in the development of several new technics. Among these is the use of red cells as surgical dressings. According to R. O. Muether (*Southern Med. J.* 38:330, 1945), the preparation of the cells for surgical dressings is relatively simple. It consists of removing the plasma from the cells and then drying them; a process devised in his laboratory speeding the drying. The resulting powder has been found very satisfactory as a dressing or as a 25 percent ointment using a special base consisting of the following:

Cetyl Alcohol	**15.0 Gm.**
White wax	**1.0 Gm.**
Propylene glycol	**10.0 Gm.**
Sodium lauryl sulfate	**2.0 Gm.**
Water	**72.0 Gm.**

This red cell salve when applied to indolent ulcers and other chronic or non-healing wounds has a very satisfactory effect. In the series of cases observed, no pain or discomfort has been denoted as is sometimes the case when the powdered cells are used. It is felt that drying the cells before incorporating them into the ointment base tends to reduce the danger of their putrefaction. At present no antiseptic drug is included in the ointment, but such an addition may be wise if the material is to be kept for long periods of time.

Vitamin B_6 for Agranulocytosis

Agranulocytosis or agranulocytic angina is a severe and often fatal disease marked by complete or nearly complete absence of granular white cells from the blood. According to a note in *Modern Medicine* (13:69, June 1945), intravenously injected pyridoxine hydrochloride or vitamin B_6 is suggested as a cure for this condition by M. M. Cantor and J. W. Scott on the basis of favorable results noted in 3 patients, in 1 of whom blood transfusions and injections of pentose nucleotide had been completely ineffective. In all 3 definite improvement began within forty-eight hours after the first injection of pyridoxine. The most effective daily dosage was found to be 200 mg. given as a 10% solution in physiologic saline. Beneficial effects of injections of liver and some liver extracts observed by other investigators are probably due to the pyridoxine content. Pyridoxine probably acts upon the myelocytic elements of the bone marrow and is undoubtedly the factor involved in the maturation and emigration of polymorphonuclear leukocytes.

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Penicillin Aerosols

Despite advances, there are still occasions when the administration of penicillin presents certain difficulties. In an effort to overcome some of these difficulties, true aerosols of penicillin have been used by Knott and Clark (Lancet 1:468, 1945 to obtain absorption of the drug via the respiratory tract, particularly the lungs. These aerosols are mists composed of such very small particles that they long remain suspended in the air and quickly penetrate to distant parts of the room. The authors showed that, at room temperature, an aqueous sodium penicillin aerosol remained fully active for at least 90 minutes, and could be projected many feet. Penicillin inspired in this form without the use of a mask readily passed into the circulation, was excreted in the urine, and could soon be detected in the blood in therapeutically useful concentrations. The amount used was 20 cc. of sodium penicillin solution (10,000 units per cc.) in water, dispersed in a 3000 cubic foot room during one hour. The administration of penicillin by this means may have several useful clinical applications; in a small room, for example, several adults could be treated at the same time without disturbing them in any way.

Treating Industrial Contact Dermatitis

In discussing new concepts in the Therapy of industrial contact dermatitis N. P. Anderson *Calif. & West. Med.* 62: 17, 1945) points out that most causes of these skin conditions are definite poisons. As such, these poisons can be neutralized by various antidotes provided suitable determinations of the responsible factors are made. In some cases direct chemical neutralization may be used. Thus a corrosive and irritant alkali can be neutralized by the use of a weak acid, such as acetic acid or citric acid, or even boric acid compresses. The following preparation, originally recommended by Reuter, may be used as a protection against alkaline solutions:

Lanolin	**9.0**
Stearic Acid	**50.0**
Triethanolamine	**2.7**
Carbitol	**18.0**
Saturated solution of boric acid	**120.0**

Conversely, the use of weak alkalies, like sodium bicarbonate or sodium borate, is indicated in the neutralization of irritant acids.

A second valuable procedure is the use of detoxifying chemicals which act on the irritating materials to form either insoluble or nonirritating chemical compounds. Thus the dichromates can be detoxified by sodium or potassium bisulphite. Dermatitis from tincture of iodine can be neutralized by wet dressings of 5 to 10 per cent sodium thiosulfate. Dermatitis due to fluorides should be helped by repeated applications of a paste made of glycerine or liquid petrolatum and magnesium oxide, followed by wet dressings of 10 per cent calcium gluconate. Many other similar examples of neutralization are cited.

Adsorption, the third point of approach, appears to have been neglected in the treatment of external poisoning. For example, mercurial preparations and chlorinated hydrocarbons belong to a group of preparations which may be adsorped by the external use of McNally's general antidote, made as follows:

Magnesium oxide	**2 parts**
Activated charcoal	**1 part**
Tannic acid	**1 part**
Purified fuller's earth	**1 part**

Imbalance of Vitamin B Factors

Writing in the *British Medical Journal* (1:433, 1944), M. B. Richards points out that in the clinical literature during recent years there have been numerous indications of a certain interrelationship or antagonism between various factors of the vitamin B complex. Pellagrins, after treatment with nicotinic acid, often show signs of beriberi or of ariboflavinosis. There is little doubt that in many of these cases the deficiencies in the diet were multiple, and it is assumed that successful treatment of the predominant deficiency with a single factor of the B complex showed up other deficiencies which had previously been masked. At the same time there is the possibility, in some cases at least, that secondary deficiencies were induced by the excessive dosing with one particular factor of the B complex, and that the unbalanced proportions of the different factors gave rise to a deficiency which was not present under the original conditions.

One or two unsuccessful attempts have been made to induce symptoms of deficiency of one B factor by excessive dosing with another. Recent experiments on rats, however, have produced clear-cut evidence of the adverse effects that may be caused by a disturbance of the balance of the vitamin B factors in the diet, and have shown that overloading with one component, B_1, can produce a definite deficiency of another component, B_6. Follow up studies have served to confirm these findings.

Since it is becoming increasingly recognized that in the treatment of pellagrins with nicotinic acid it is essential to provide other members of the B complex and to prescribe a liberal and well-balanced diet, Richard's experiments would suggest the necessity for adopting a similar procedure for other B factors, and in particular, when B_1 therapy is indicated, for supplying the whole B complex instead of the single vitamin.

New Colloid Laxatives

Hydrophilic gums, like acacia, karaya, Fragacanth, bassora, agar, Irish moss, and psyllium seed, occupy a prominent place among the various physical agents used in the treatment of constipation. With them may now be included newer synthetic materials. According to an editorial in the *Journal of the American Medical Association* (127:992, 1945) the recent development of several synthetic mucilages, such as polyvinyl alcohol and methylcellulose, provide hydrophilic colloids which are nontoxic when given orally, are not absorbed by the intestinal mucosa, are not degraded by intestinal enzymes and are nonantigenic. In addition to these obvious advantages over the natural gums they have a high degree of chemical uniformity. Numerous experiments in feeding man and animals with methylcellulose have shown that it is excreted practically quantitatively with the stool without any untoward effects even after prolonged administration. One investigator used the highly viscous type of methylcellulose (4,000 centipoises) as a colloid laxative in animals and in man and found that only 5 Gm. twice daily produced stools with increased water content and bulk, semisoft consistency and easy passage. These hydrophilic colloids share with the other gums the advantage over liquid petrolatum that they do not interfere with the intestinal absorption of fat soluble vitamins and are not taken up to any degree by the intestinal mucosa.

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Flash Burn Cream Formula

Considerable interest has been evinced in the flash burn cream developed for use by the Armed Forces, but little information has been available concerning its composition. A paint-like film developed by the Naval Research Medical Institute to protect exposed skin against flash burns, the cream has recently been adopted by the Army for issue to tank crews and men using bazookas and flame throwers according to an item in *Modern Medicine* (13:117, June, 1945), the cream which is applied in much the same manner as a woman's beauty mask, has the following composition:

Shellac	**13.70%**
Isopropanol (99%)	**28.48**
Linseed oil (boiled)	**3.50**
Stearic acid	**0.15**
Flexol	**0.80**
Carbitol	**1.10**
Titanium dioxide	**37.00**
Borax	**2.25**
Magnesium stearate	**8.00**
Methyl salicylate	**2.50**
Duponol	**0.30**
Mineral black	**2.22**

Quite inexpensive to manufacture, this cream has many peace-time uses, as, for example, in fire-fighting or the like.

Lotions to Prevent Oil Dermatitis

The Industrial Health Section of the Illinois Medical Journal *(86:284, 1944) cites at length the discussion of E. Collier of Glasgow on the prevention and control of cutting oil dermatitis. According to Collier, the chief measures in preventing this skin condition is the careful selection of workers and emphasis on personal cleanliness. Also of great importance is the use of protective lotions which should be made available to all workers. If working with soluble oils, employees should use the Alkaline Wash; if working with paraffin oil, they should use what the writer calls Dermis Wash, to contrast it with Alkaline Wash. The respective formulae of these washes are:*

Alkaline Wash

Chlorinated lime	**175 grains**
Sodium bicarbonate Crystals	**350 grains**
Boric acid crystals	**35 grains**
Water, to make	**30 oz.**

Dermis Wash

White soap flakes	**7.48 parts**
Glycerine, C.P.	**26.40 parts**
Sodium silicate	**24.20 parts**
Tragacanth	**0.21 parts**
Oil of lemons	**0.16 parts**
Water	**41.60 parts**

The paste thus formed is dissolved in water in the proportion of 1 pound of paste to 2 gallons of water.

Workers are advised to use these washes after getting home from work and before starting out in the morning, as follows: 1. Dilute the wash 1 part to 10 parts of water, 2. Apply the wash to the hands, arms, etc., 3. Wash these parts with hot water and soap (not medicated). Dry thoroughly. Such treatment will remove all traces of oil from the skin and will prevent the onset of dermatitis.

Sub-Zero Temperatures

An item in the *Wall Street Journal* for April 30, 1945, by J. A. McWethy, indicates some of the actual and potential uses of sub-zero temperatures in the manufacture of modern life-saving materials. Blood plasma and penicillin, for example, are dehydrated at 15° below zero. Dehydrated penicillin will last 18 months compared with two or three days when it is in solution. Blood plasma, when dehydrated, stays potent five years against one year when in the liquid state. Cold is used because if the moisture were driven off with heat it would destroy the potency of the plasma or penicillin. The liquid plasma or penicillin in solution is frozen and then subjected to a high vacuum.

Equipment used for obtaining low temperatures varies. Some are quite complex, others fairly simple. One type of unit uses dry ice as the refrigerant; the unit consisting of a steel-lined plywood cabinet divided into two sections. Dry ice is charged into one section and air is circulated over it with a fan. A hand-operated damper in a duct between the two sections limits the amount of air passed over the dry ice in rough proportion to the temperature desired. Liquid air or liquid nitrogen may be employed in two ways: by immersing the product in the liquid gases, or the gas from the liquid may be used to attain the cooling effect.

Dermatitis from Cold Wave Chemicals

Writing in the Urologic and Cutaneous Review *(49:117, 1945), H. Goodman warns that dermatitis may follow exposure to the chemicals used in the administration of a cold wave permanent. Hand damage to operators is the most common form of injury, but irritation of the scalp of patrons may also occur. It is Goodman's belief that this dermatitis represents a response to poisonous material and is not an allergy in the usual sense of the term. The alkalinity of the solutions of salts of thioglycolic acid of the cold wave permanent process are recognized as important at this time.*

Clinical features of reaction of the skin in insult of the cold wave permanent chemicals cover the entire range: redness, blisterformation, pus, crusts, cracks, thickening, itching and scratch effects. The hands and particularly the fingers are the usual sites of the eruption. The wrists at the level of the glove aperture may evidence eruptive lesions in operators wearing gloves but permitting the solution to reach the unprotected skin of the exposed wrists. Distant parts of the skin may also be affected. The operator may not guess at the cause, and it requires repeated questioning and minute description of work done and things touched during the beauty operation to have the worker relate the possibility of irritation from cold wave permanent fluids.

Treatment of the worker will depend upon the phase of reaction presented at the time of examination. The immediate cessation of work is mandatory. In great measure the skin reacting to thioglycolic acid no longer tolerates many previously harmless materials. Upon return to normalcy, the worker must be superlatively careful in protecting the skin from the same or similar chemicals.

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Triethanolamine Formulas

Although triethanolamine is no newcomer to the cosmetic field, H. Goodman (*New York State Pharm.*, Feb. 1945 p. 34) has recently presented a brief discussion of its properties and uses as an emulsifying agent. Included in this review were several samples of triethanolamine formulas that may be of interest:

Lotion of Stearic Acid and Triethanolamine

Stearic acid	4
Triethanolamine	1
Water, to make	100

Melt stearic acid. Heat water and triethanolamine together and mix at same temperature until cool and smooth.

Cream of Stearic Acid and Triethanolamine

Petrolatum	4
Stearic acid	22
Triethanolamine	11
Water, to make	100

Melt the solids together, and heat the water and triethanolamine to same temperature. Mix.

Brushless Shave Cream

Stearic acid	20
Cocoa butter	6
Castor oil	6

Melt and add to heated mixture of:

Triethanolamine	1
Borax	1
Glycerine	6
Water, to make	100

Stir

Vanishing Cream

Stearic acid	16
Triethanolamine	1
Glycerine	6
Water, to make	100

Melt the stearic acid and stir into heated mixture of other ingredients.

Circa 42: New Itch Remedy

A new itch remedy, called Circa 42, has been developed by J. F. Yeager and C. S. Wilson of the U. S. Department of Agriculture's Research Administration. According to the announcement by the U. S. D. A. Circa 42 relieves skin irritations caused by bites or stings of insects, such as chiggers, mosquitoes, spiders, wasps, and others, or by fungus infections, poison ivy, and "unknown" causes. Limited tests on persons in this country and in tropical areas have indicated Circa 42 to be a promising remedy for relief of itching skin for all but a few of those who have tried it.

Easily prepared, Circa 42 is a doughy non-greasy cakelike material, which is applied by hand in a thick layer over the itching regions, but not rubbed in. It is made of five materials, two of which produce a local skin anesthesia, without harm to the skin:

N-butyl-p-amino-benzoate	100.0 Gm.
Benzyl alcohol	170.0 cc.
Anhydrous lanolin (melted)	20.0 cc.
Cornstarch	640.0 Gm.
Sodium lauryl sulfonate	64.0 Gm.

More benzyl alcohol is added in mixing the other ingredients, according to the following directions:

1. Warm the benzyl alcohol, and dissolve in it the n-butyl-p-aminobenzoate making an approximately saturated solution.

2. Add melted lanolin, keeping the mixture warm and stirred until as much of the lanolin as will dissolve is in solution.

3. Mix well the cornstarch and sodium lauryl sulfonate, and add slowly to this powder, a little at a time, the warm liquid prepared in step 2. Knead this mixture to distribute the liquid evenly through the powder.

4. Add benzyl alcohol—about a tenth of that already used—to produce a doughy, non-greasy, cakelike ointment that can be packed in ointment jars or other suitable containers. It is better not to use containers made of metal.

Sunburn Protective

Everyone, says M. W. Green in the *Bulletin of the National Formulary Committee* (13:111, 1945), has at some time experienced the dire consequences of unwise exposure to the sun. A lotion or cream to protect the individual from detrimental sun rays would be very useful. At the same time, because the appearance of a tan is desirable for cosmetic reasons, enough of the burning rays must get through such a product to assure pigmentation. Taking the many factors into consideration, Green has developed the following formula for a hydrophilic protective ointment:

	Gm.
Phenyl salicylate	5.0
Ethyl aminobenzoate	2.0
Titanium dioxide	1.0
Neocalamine	1.0
Yellow ferric oxide	0.1
Coumarin	0.1
White wax	2.0
Triethanolamine	0.5
Stearyl alcohol	8.0
Stearic acid	2.0
Glycerine	10.0
Distilled water, *q. s. ad*	100.0

Place the triethanolamine and the stearic acid in a 250-cc. beaker and heat together on a water bath for ten minutes. Add the white wax and the stearyl alcohol and melt completely. Add the phenyl salicylate, ethyl aminobenzoate and the coumarin. After all the ingredients have completely melted, add the titanium dioxide, neocalamine and yellow ferric oxide in a fine state of division and mix well. Heat the distilled water and glycerine together to about 70° C and then add to the other ingredients with constant stirring. Continue the stirring until the emulsion forms and has an ointmentlike consistency.

It must be realized, of course, that preparations of this type have definite limitations. The amount of burn-producing rays, individual susceptibility, the thickness of the layer of sunscreen ointment, as well as other factors, determine the length of exposure an individual can tolerate without applying more of the ointment. Valuable as a general protective against the sun, it is felt that such a product should also be useful for individuals particularly sensitive to sunlight and for certain types of photosensitizations.

Concentrated Scabies Lotion

Because scabies or "the itch" has already reached epidemic proportions in the war-torn countries of Europe and because under normal conditions it is generally regarded as a common skin disease, considerable study has gone into methods for efficiently treating the condition. Benzyl benzoate lotions appear to be the most effective means of combatting scabies and quite a few preparations based on this agent have been developed and tested.

Since the U. S. Army is now using benzyl benzoate to cure scabies infestations among troops, workers in the laboratories of the American Pharmaceutical Association, as part of a study of the drug, developed a concentrated lotion to save urgently needed shipping space. According to a report in the March, 1945 issue of the Journal of the American pharmaceutical Association, *Practical Pharmacy Edition, the concentrate is made by warming together on a water bath 2 Gm. of triethanolamine and 8 Gm. of oleic acid, then adding benzyl benzoate, with stirring, to make 100 cc. In the field, 25 cc. of this mixture is added to 75 cc. of water in a bottle and shaken to produce the finished 25% emulsion. This formula was submitted for consideration to the Office of the Surgeon General and has been scheduled for Army production. The preparation will save three-fourths of the shipping space that would be required for the finished emulsion.*

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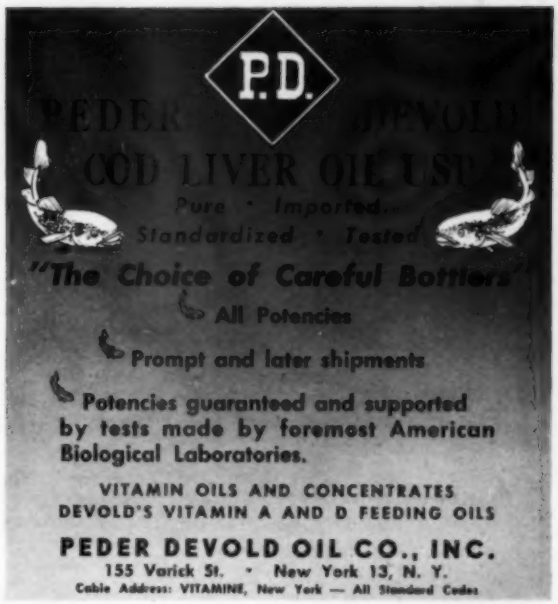
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All-American Allspice

According to E. L. Tanner in *Agriculture in the Americas* (5:59, 1945), allspice, pungent and aromatic, is All-American. It is one of three spices which the conquest of the Americas gave to the world, and one whose commercial production is, up to the present, limited to the Americas. It is said that this spice was first introduced into Europe shortly after the beginning of the seventeenth century as a substitute for cardamon, the aromatic fruit of an East Indian herb. Nearly a century later it was distinguished as a Jamaica spice under the name of "sweet-scented Jamaica pepper or allspice." The common name "allspice" originated from the resemblance of its flavor and fragrance to a combination of spices, with nutmeg, cinnamon, and cloves predominating.

The tree which produces allspice is known botanically as *Pimenta officinalis*, belonging to the myrtle family and to the same genus as the clove tree. The allspice tree is a beautiful evergreen tree, well shaped, and growing to a height of 30 feet, with occasional specimens up to 40 feet. The fruit, borne in terminal clusters, is a round berry about .3 inch in diameter. The berries are harvested when the color is still green. They cure with a rough surface and a dark brown color, which always characterize the best grades.

The allspice tree is native to the Caribbean Islands and to some parts of the adjoining mainland of southern Mexico, Central America, and northern South America. It is found on soils of a calcareous nature and is cultivated from low elevations up to altitudes of 4,000 feet.

The commercial product enters trade from Jamaica, Mexico, and Guatemala. The 5-year averages of 1937-1941 shipments from the three countries were: Jamaica more than 5,000,000 pounds, Mexico about 500,000 pounds; and Guatemala 25,000 pounds. Of the world's production, the Western Hemisphere uses slightly more than 40 per cent and most of the remainder goes to Europe.

Perfumer's Shelf

Essential Oil of Olearia Paniculata

Writing in the *Journal of the Society of Chemical Industry* (64:28, 1945), D. H. McLean and S. N. Slater report that steam distillation of the leaves of *Olearia paniculata*, a shrub endemic to New Zealand, gave 0.1 per cent of an oil with the following properties:

Index of refraction	**1.5029**
Specific gravity	**0.9369**
Specific rotation	**-17.0°**
Acid number	**2.5**
Ester value	**41**

Vacuum fractionation of the oil yielded 10 per cent terpenes and 48 per cent sesquiterpenes. The terpene fraction yielded pinene and limonene. The sesquiterpene fraction yielded about 9 per cent of a new oxygenated terpene, $C_{20}H_{34}O$; melting at 99°C, boiling 165°C. at 6 mm. pressure, and with a specific rotation of -35.8° (in chloroform). It contained one double bond, no active hydrogen, no aldehyde or ketone function and no methoxy group. On hydrogenation it gave a product melting at 35-6°C; on oxidation with potassium permanganate it gave an acid, $C_{19}H_{32}O_{31}$, melting at 149°C.

Perfume Materials Patent

Pinaceous, camphoraceous and mint-like perfuming materials may be made by the methods described by H. vanB. Joy and J. B. Rust in U. S. Patent 2,373,568. Essentially the patent relates to the production of perfume materials formed from the reaction of methacrolein with conjugated dienes; these substances being mixed and heated in a pressure reactor and then fractionally distilled, preferably under diminished pressure. If desired, the resulting products may be reacted with ketones having a reactive methylene group to form additional perfume materials. In an illustrative example, 20 parts of methacrolein was heated with 23.4 parts 4-methyl pentadiene 1,3 in a pressure reactor 8½ hours at 142°C. bath temperature. After removal of unreacted material, a fraction boiling at 60-64° C., at 3½ mm. or 71-74° C. at 8 mm. came over. It had a pinaceous odor.

Essential Oils from Northeastern Woods

In a very comprehensive discussion of extractives from Northeastern woods, R. S. Aries (*Chemurgic Digest* 4:153, 1945 states that research on such extractives has a wide horizon. For example: the knowledge recently gained in synthetic reproduction of perfumes, flavoring extracts, and the like indicates the scope of possible development which might follow an intensive study of the numerous substances which form the extractive components of our woods.

According to Aries, the chief extractives of wood are essential oils, acids, gums, resins, waxes, fixed oils and fats, tannins and other coloring matter, carbohydrates, and salts. These substances are not component parts of the cell wall, and most of them are removable by means of inert solvents or by distillation with steam. A number of the wood extractives come forth only under abnormal conditions, such as that produced by tree tapping, for turpentine or for maple sirup, or that brought about by action of insects, as in the formation of gallnuts on the oak. The pines now standing in the Northeastern region possess a comparatively small amount of turpentine-producing substance. There are few data available on the oils of the pulp wood. Thus a volatile oil has been isolated in the digestion of sprucewood by the sulfite process. Two of its constituents have been determined as p-cymene and borneol. Bergstrom distilled a brown oil produced by the same process with sprucewood and obtained a product with a fifty percent cymene content on the first distillation, a crystalline fraction at a higher temperature, and another slightly dextrorotatory fraction with a density of 0.952, at a still higher temperature.

In tabulating some chemically investigated extractives of Northwestern

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woods, Aries presents the following data with regard to essential oils and their sources:

Tree species involved	Volatile Constituents: Essential Oils
Pinus strobus (white pine)	1-a-pinene
Pinus sylvestris (Scotch pine)*	d-a-pinene, A-3-carene dipentene, 1-limonene terpineal, Sp. Gr. 15°C. 0.8646-0.867 (a) +8° to + 25.87° (from oleores) From wood: a and b pinenes, D-A^3-carene, d-A^4-carene, a-terpinene
Picea canadensis (white spruce)	An oil containing p-cymene and borneol
Tsuga canadensis (Hemlock)	Hemlock, (spruce) oil
Abies balsamea (Balsam fir)	Canada turpentine 15-20% volatile oil 1-pinene, bornyl acetate. Sp. Gr. 1.00 Refr. Ind.1.530. (From blisters, bark)
Pseudotsuga taxifolia (Douglas fir)*	Oil from wood, 3.3%: 30% 1-a-pinene, 6% 1-camphene, 14% 1-limonene, 32% 1-a-terpineol
Thuja occidentalis (N. white cedar)	white cedar oil
Juniperus communis (Juniper, dwarf J.)	Cade oil, from wood. Composition similar to that of Sp. cedar: 70% sesqui-terpenes, 1-B-carophyllene, 1-cachinene and cedrene. 5% to 10% sesqui-terpene alcohols compr. pseudacedrol and 2 unknown alcohols; 3-4% ketones, 0.390 phenols. Sp. Gr. 0.854-0.879 at 25°C; Op. Rot. 0° to -15° in 100-mm at 25°; Ref. Ind. 1.4740-1.4840 at 20°C.
Juniperus virginiana (red cedar)	Wood contains 2.5%-4.5% oil; cedrene, cedrol, cedrenol, pseudocedrol. Name Cedarwood Oil. Ref. Ind. about 1.504 20°C and 1.55 at 18°C.
Betula lenta (Sweet, black birch)	From bark and twigs: oil principally of methyl salisylate. Sp. Gr. 1.176-1.182 at 25°C. Ref. Ind. 1.5350-1.5380 at 20°C.
Sassafras varifolium (Sassafras)	Sassafras oil: safrole 80%, a-pinene, phellandrene, d-camphor, sugenol, sesquiterpenes. Sp. Gr. 1.-(18) 065-1.077 at 25°C; Op. Rot. 2° to 4° in 100 mm at 25°C Ref. Ind. 1.5250-1.5350 at 20°C.
Hamamelis virginiana (Whitch Hasel)	Very small amounts of a volatile oil in extract containing alcohol and water.
Tilia glabra (American Bass)	Oil, rich in vol. fattv acids

Oil of Patchouli

A monograph, written by M. N. Subba Rao and M. Nagesa Rao and published by the Board of Scientific and Industrial Research of the Government of Mysore, presents much valuable information on patchouli oil. Among the essential oils in perfumery, patchouli oil occupies an important place. It is one of the finest fixatives for the heavy type of perfume like amber, chypre and fougere. As a soap perfume, it blends well with geranium, clove, vetiver, cassia and other oils.

The European markets were first familiarized with patchouli via the costly Indian shawls which were always distinguished from others by the odor of patchouli the leaves of which were long used to keep moths and other insects from the silks. French manufacturers, having discovered the secret of the Indian shawls, imported the dried leaves to perfume articles of their own make. Today, the bulk of the world's supply of patchouli oil comes from the Dutch East Indies and Malay States. Small quantities are also produced in Seychelles and Madagascar. Patchouli oil is the powerfully odorous essential oil obtained by steam-distilling the dried leaves of *Pogostemon patchouli*, Pellet and other species belonging to the order *Labiatae*. *Pogostemon patchouli*, Pell. is the genuine patchouli plant of commerce and is cultivated principally in the Straits Settlements, the Island of Penang, Singapore and the Wellesley Province. This is a non-flowering plant whose dried leaves are distilled on the spot or exported to Europe and the United States in bales. The genuine patchouli leaves are often adulterated with wild patchouli and the leaves of a plant known as "Ruku" by Malayans. The leaves of a weed growing on coconut plantations are also used to mix with the genuine leaves. Sometimes considerable quantities of soil and sand are present in baled patchouli leaves.

Preliminary work done on the cultivation of Singapore patchouli in Bangalore by the authors indicates a bright future for the large-scale cultivation. Natural conditions in India are favorable for such cultivation. The yield and quality of the oil are very encouraging.

The drying of the patchouli leaves increases the oil content, but the odor is modified only by fermenting the leaves. It may be said that fermentation of the leaves improves the quality of the oil. In a general way, three different patchouli oils may be differentiated: (1) Oils distilled in Europe from dry Singapore leaves. They constitute the bulk of the patchouli oil of commerce. (2) Oils distilled in Singapore. (3) Oil distilled from Java leaves, including the Dilem oils. The oils distilled in Europe from Singapore leaves possess a finer odor than those distilled elsewhere. Ranging in color from greenish-brown to dark brown, this oil possesses an intense, persistent and penetrating odor. The imported Singapore oils are mostly of a lighter color and their odor is less intense than those prepared in Europe. Oils distilled from Java leaves are characterized by a much fainter odor which is almost calamus-like.

The odor of patchouli oil is considerably improved by aging; the "aged" oils acquiring the full odor of true patchouli. However, the aging period must be determined by the individual perfume blender. According to one authority, aging of the oil for a prolonged time yields that full, rich, almost fruity odor for which the best grades of patchouli oil are renowned and so highly esteemed by expert perfumers.

Although the oil has been examined extensively, as yet little is known concerning the substances serving as the bearers of the characteristic odor. The oil contains a sesquiterpene alcohol, $C_{15}H_{26}O$. Called patchouli alcohol, it occasionally separates from the oil on long standing. Parchouli alcohol crystallizes in transparent, water-white hexagonal prisms. It melts at 56°C, and is strongly leavo-gyrate. The specific rotation in the fused state is—118° and in chloroform, the specific rotation is -92°42′. On dehydration it yields patchoulene, a sesquiterpene with a cedar-like odor.

Investigations of various patchouli oils, including distillates of leaves grown in Bangalore, have been made and are reported in detail in the monograph. Illustrative and the analytical values obtained from oils supplied by two well-known European firms:

	Sample A	*Sample B*
Specific gravity 15°/15°C.	**0.9627**	**0.9747**
Refractive index at 20°C.	**1.5073**	**1.5088**
Optical rotation	**-53°**	**-50°**
Acid value	**1.60**	**1.36**
Ester value	**4.39**	**2.78**
Acetyl value	**56.85**	**41.45**

Tested for solubility in 90 per cent alcohol at 20°C, both oils displayed the same values; 1cc. being soluble in 0.5 to 10 cc. of alcohol.

In contrast to these characteristics are the analytical values for a Mysore patchouli oil:

Specific gravity 30°/30°C.	**0.9101**
Refractive index at 30°C.	**1.4988**
Rotation	**-22.0°**
Acid value	**1.1**
Saponification value	**8.4**
Saponification value after acetylation	**31.6**

Patchouli oil is sometimes adulterated with cedarwood oil or its higher fractions. This has the effect of lowering the constants of the oil.

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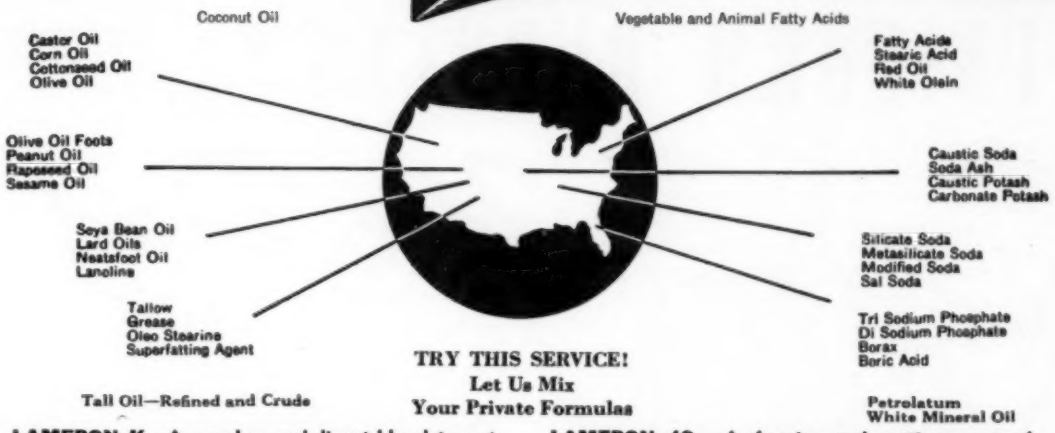

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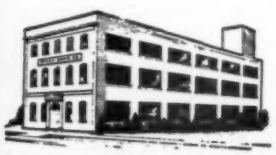

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PURCHASING DEPARTMENT

Glycerin Supply Position Tightens; More Alcohol Likely for Drugs and Cosmetics

If present demands for glycerin for Ordnance and explosives manufacture continue, at least 50 percent of the August production will go for military uses it is believed in trade circles. Stocks declined 3,985,000 pounds in May with a total on hand May 31, 1945 of 67,-713,000 pounds. In discussions in Washington it was recently brought out, however, that as long as stocks did not go below 50,000,000 pounds, the supply position of the market could not be considered serious.

Movement of glycerin to ordnance plants has been running into a considerable tonnage since last August and if the present demand continues it is generally feared that considerably less material will be available for cosmetics, tobacco, perfumery and other civilian uses over the remainder of the year. The inquiry for August is reported as brisk as it was for July. A small tonnage inquiry is reported to have appeared in the market for Lend-Lease but in view of the growing shortage of material it is not expected that there will be any free material available for export.

A fair size tonnage of crude glycerin is believed to be available in South America but the prices quoted for future shipment are reported over present ceilings.

Alcohol Use Cut

Substantial reductions in the need for industrial alcohol were disclosed as the War Production Board announced that registered distillers will be required to produce only 70 percent of their capacity during August and September, and not more than 50 percent beginning in October.

Even further relaxation of controls over the production of war alcohol was promised in the fourth quarter, when the WPB expects to be able to revoke altogether Order M-69, controlling all registered distillers.

These actions, WPB explained, are possible as a result of reduced requirements for alcohol by the armed forces and other consumers.

Total requirements for industrial alcohol for this year have been scaled down from 548,000,000 gallons of 190 proof, anticipated in June, to 528,-000,000.

JULY PRICE CHANGES

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Almond oil sweet 5c
Asafetida 15c
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Bergamot oil $1.50
Chamomile flowers Hung. 1c
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Grape fruit oil 10c
Lemon grass oil 80c
Senega root 40c
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DOWN

Arabic gum sorts 1/2c
Arnica flowers 10c
Cedar wood oil 5c
Celery oil $2.25
Dill oil 10c
Echinacea root 5c
Geranium oil Bourbon 25c
Ginger oil $2.25
Juniper berry oil $1.
Lavender spike oil 20c
Menthol $1.50
Mercury bichloride 9c
metal $6.
Red precip. 13c
Scammony root 2 1/2c

• **Prices quoted in this section were current on the first of this month.**

Direct military and lend-lease needs, however, have increased from an estimate of 52,000,000 to 62,000,000 gallons, and requirements for indirect military and essential civilian uses, from 168,-000,000 gallons to 171,000,000.

Sharpest cut was made in estimates for the synthetic rubber program, where alcohol requirements dropped from 292,000,000 to 259,000,000 gallons. Anti-freeze needs remained at 36,000-000 gallons in both estimates.

Camphor Still Controlled

Although synthetic camphor was removed from allocation July 2, use of the material is still controlled under the miscellaneous chemicals order M-340. While slightly larger quantities have become available for general civilian use, major distributors explain that they are still only able to take care of a fraction of the consuming trades' requirements and that it will take some time before civilian needs will be completely taken care of.

Freedom from dependence on Japan as our main source of natural camphor and a new type of crop for American farmers are the prospects resulting from successful experiments with camphor basil at the U. S. Department of Agriculture's Bureau of Plant Industry, Beltsville, Md. Based on an average yield of 100 pounds of camphor per acre, 10,000 to 20,000 acres would need to be planted by American farmers to replace the amount imported from Japan before the war.

Camphor is a familiar remedy in American households. Not so well known is its use by injection as a heart stimulant and industrially in the manufacture of celluloid and pyroxylin plastics.

The species of camphor basil tested at the Bureau of Plant Industry requires a growing period of only 120 days or so. "It is obvious," the experimenters state, "that a herbaceous plant that gives a high yield of 'natural' camphor and that can be grown in one season as a farm crop would have certain advantages over the camphor

(*Continued on page 257*)

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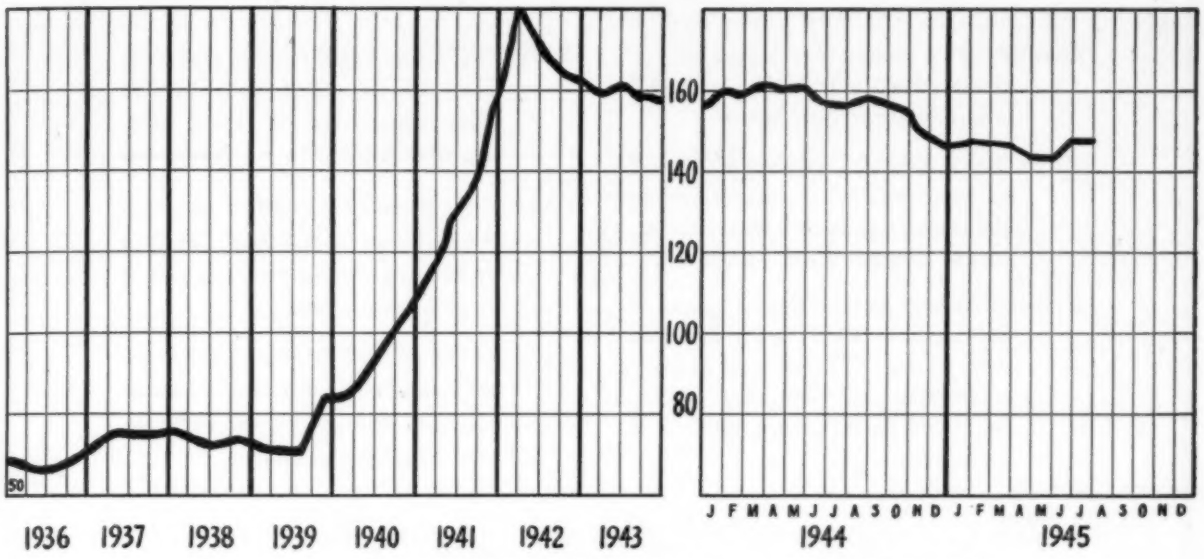


The price index of fifty commodities for July declined fractionally from 150.2 to 150.1.

Importations of Citronella Oil Threatened; Lemongrass in Small Supply, Higher Shipping Prices

Future importation of citronella oil is seriously threatened by the action of the Customs Department in classifying recent arrivals as perfume compounds which will command a duty of 40c per pound plus 30 percent ad valorem. It is understood that certain arrivals were found to contain a percentage of petroleum distillate although importers maintain that citronella has never been found to be entirely free from foreign substances.

Substantial quantities of citronella are used in the manufacture of soap and in insecticides. It is understood that several lots have been detained and as a result future trade is virtually at a standstill pending further developments. There are not many other substitutes that can be used in place of citronella oil although in some quarters it is believed that some manufacturers may be in a position to use Brazilian sassafras oil.

This situation has already materially affected the spot market position of Ceylon Citronella oil which has advanced materially in price and is now offered at a range of from $1.25 to $1.50 per pound as to quantity and seller.

Exports of citronella oil from Ceylon during the first quarter of 1945 amounted to 72 per cent above the preceding quarter and were 13 per cent higher than those during the first quarter of 1944.

Lemongrass Higher

Another interesting development in the essential oil market is the sharp advance in shipping prices of lemongrass oil which is used in the manufacture of ionones and citral for perfumes. Latest prices on this material from India are reported at $2.40 to $2.50 per pound as compared with previous offerings at $2. to $2.07 per pound. The United States imported greater quantities of lemongrass from India last year than in any other previous twelve-month period and it is the steady rising demand from this country that is causing the upward movement in shipping prices.

In spite of heavy imports the supply situation on spot grows tighter and prices have advanced to a range of from $2.50 to $2.60 per pound with little being offered at any price.

Cinnamon Oil Shipments

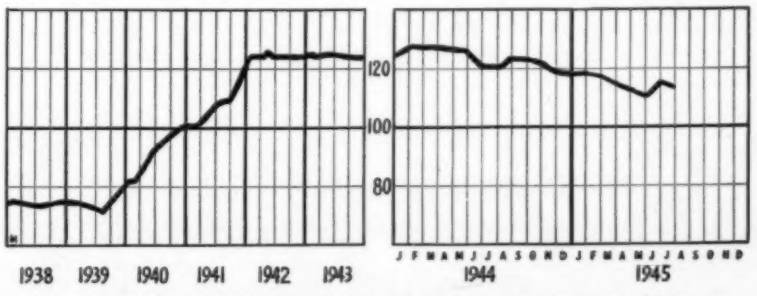
Shipments of cinnamon-leaf oil during the first three months of 1945 were approximately double those of the preceding quarter but were 30 percent below exports throughout the first quarter of 1944.

Exports of cinnamon-bark oil from Ceylon in the first quarter of 1945 were 20 percent lower than during the preceding quarter and only one-third of the shipments during the corresponding period of 1944.

Aromatics Tight

The situation in aromatic chemicals was extremely tight notwithstanding the excellent showing made by American manufacturers as disclosed by a release issued by the United States Tariff

15 Medicinal Chemicals—Weighted Price Index. 1926=100.



The medicinal chemicals index declined from 131.7 to 129.3. Menthol was lower at $7.50; mercury dropped to $143.

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commission. Total production for 1943 was more than three times that in 1938. The following table prepared by the commission is evidence of the advance of synthetic aromatic chemical manufacture here under very difficult circumstances:

	Pounds
1943	17,531,000
1942	17,787,000
1941	14,199,000
1940	7,993,000
1938	5,311,000

Mint Crops Promising

Results of a survey made by the Bureau of Agricultural Economics were made public in Washington, and the report on peppermint acreage planted this year came as welcome news to the trade generally. The following tabulation of plantings gives the acreage cultivated this year in comparison with that worked a year ago.

Peppermint Acreage: 1945

	Acres	
	1945	1944
Indiana	19,500	17,700
Michigan	15,000	12,000
Ohio	240	160
California	1,070	1,120
Oregon	6,200	5,000
Washington	4,500	3,900
Total	46,510	39,880

According to the crop reporting board, the roots came through the Winter in excellent shape in Michigan. Although about two weeks late, the crop is in good condition. Major producing states reported that although the Spring proved to be very cool this year, thus retarding mint growth to some extent, the present indication is for an oil production larger than in 1944 if the present good condition of the crop generally continues.

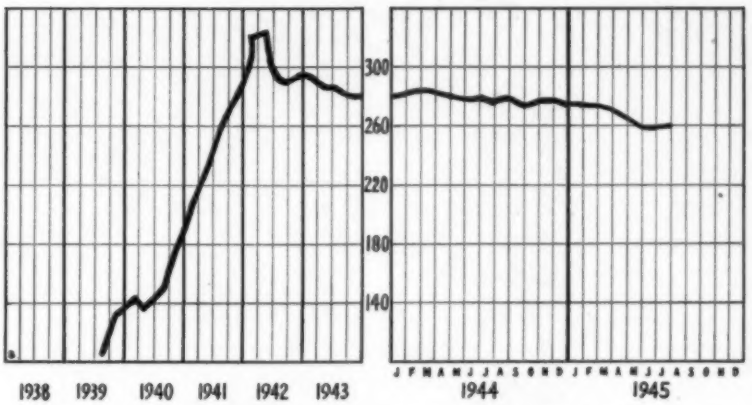
The report on spearmint states that acreage planted this year totals 8,600 acres, which compares with 7,700 acres planted last year. The Indiana acreage in 1945 is 6,400 acres, comparing with 5,800 acres in 1944; Michigan 2,200 acres, against 1,900 acres in 1944.

Bergamot Available

Manufacturers are believed to have built up a fairly large stock of bergamot oil as the result of the substantial quantities that have arrived here since last Fall. The last arrival amounting of 110,000 pounds is said to be equivalent to a full year's supply.

It is reported that an additional 45,000 kilos of bergamot oil has been purchased in Messina for export to the United States. When and if this material arrives here it is likely that the supply will be considerably greater than consuming requirements.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index advanced from 268.1 to 268.4. Digitalis jumped sharply to $1.10.

Miscellaneous

Approximately 34 cases of caraway oil is reported to have arrived from Russia. Lemon, lime and orange oils remain in an exceedingly firm position. Only very small quantities of lavender oil remain unsold out of the last arrival. There is very little Bois de rose oil available. The spot market is practically nominal. Dillweed oil sales were made as low as $4.65 per pound and upward to $4.75.

FINE CHEMICALS

(*Continued from page 253*)

tree which requires several years to come into production or even synthetic camphor which is also dependent on plant products requiring a long time for growth."

Menthol Lower

The future regarding Brazilian menthol seems to have become more clouded than ever in the light of the series of price reductions that have taken place over the past month or more and the continued absence of any real buying support. Starting from $15.50 per pound the market has been steadily declining and it is now possible to obtain spot goods at $8. As compared with pre-war prices that prevailed on Chinese menthol current quotations are still regarded as high. Goods expected to arrive late in July are being quoted at $7.50 per pound and there are some factors in the trade who point out that they would not be at all surprised to see the market at $5. before any reversal takes place in the general trend.

Olive Oil Source

French North Africa has great importance as a producer of olive oil. The olive oil industry is heavily concentrated in Tunisia, which accounted for nearly two-thirds of the average production of oil, 80,000 short tons, during the 10 years ending in 1937-38. Tunisian production centers largely near the coast, in the region of Sousse and of Sfax where dry-land olive culture has been highly developed. Reclamation of these areas, which had extensive olive orchards in Roman times, was begun by the Moslems in the middle of the nineteenth century and the work was greatly intensified after the occupation of the country in 1881. In 1938, out of a total of 17,500,000 olive trees in Tunisia, the region of Sousse had 7,500,000 and that of Sfax nearly 5,000,000. The only other region of much significance is Tunis, with 3,000,000 trees, most of them old.

Penicillin Prices Cut

Renewed weakness in penicillin carrying prices to an all-time low level were a feature of the current spot market. The hospital price is now established at 75c per 100,000 units and brings the cost of the article to jobbers to 59c per vial.

For the month of June 680 billion units of penicillin were allocated, of which civilians obtained 330 billion. Distribution of penicillin in the form of tablets, ointments, and the like has been authorized for civilians beginning August 1, 1945, and to meet this the pharmaceutical manufacturers started the use of penicillin in packaged

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products on July 1. Despite continued heavy military demand, stocks of the antibiotic have been increased steadily. Through government agencies, some 850 billion units have been released since March 15.

Narcotics Expand

Expansion in the use of narcotics is shown by U. S. Internal Revenue returns for April. Taxes collected on narcotic materials for the month amounted to $52,869, compared with $44,800 during the same month last year.

Cod Liver Oil Firm

Spot supplies of medicinal cod liver oil are at a low level. Demand is seasonally quiet at the moment but a decidedly firmer market is expected to develop later in the quarter when large consumers should begin to anticipate their fall and winter requirements.

The return of Norway and other European producers in the world cod liver oil market is not expected in the trade until 1946, owing to the fact that the current season is well advanced. During 1944, some 7,800,000 pounds of cod liver oil were used in the manufacture of pharmaceuticals, against 9,200,000 pounds in 1943.

Shark fishing in Mexican waters was at a low ebb during the first 2 months of 1945. Only 300 kilograms of livers were obtained from the Mamzanillo area in January 1945 as compared with 500 kilograms in the corresponding month of 1944, and 1,000 kilograms in January 1943. Conditions improved somewhat in February and a good catch of better-grade livers were reported for March 1945.

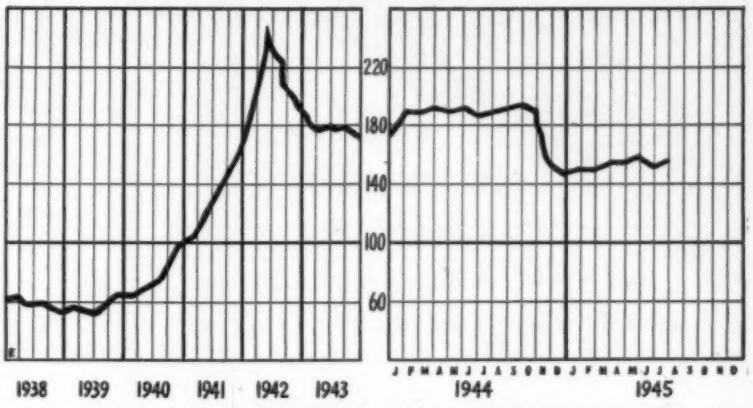
Mercurials Down

Since mercury showed a further decline to $143. a flask it became a certainty that salts manufacturers would reduce prices accordingly. The new schedules announced are: calomel $2.44 per pound; corrosive sublimate $1.92; red precipitate $2.77; mercury oxide yellow U.S.P. $2.94; mercurial mixture $2.32, and white precipitate $2.50.

Miscellaneous

Rochelle salt, tartaric acid and tartar emetic are all scarce and firm. With domestic consumption of alkalies running at a high rate resale prices on caustic soda and soda ash remain firm because of the limited quantities available for immediate delivery. Consumption of sulfathiazole is said to be running ahead of production. Sulfanilamide is reported in a somewhat better supply position. Sweetening agents including sacharine, dextrose and glucose continue in heavy demand. Other firm items in the market include thymol, sodium benzoate, and citric acid.

15 Essential Oils—Weighted Price Index. 1926=100.



The essential oils index advanced from 150.6 to 154.4. Bergamot was up to $10 a pound; citronella rose to $1.25.

CRUDE DRUGS

With Summer well under way it cannot be said that conditions affecting the collection of domestic botanicals has improved. While some war workers have returned to the collection areas in the South, they are well supplied with money and have not as yet contributed materially to the supplies of crude drugs which will be needed in the months ahead.

So far as imported botanicals are concerned there are no indications that material supplies will be forthcoming. Negotiations have been reopened with shippers but it appears that little botanical merchandise is stored abroad and very little can be collected. Add to this the fact that ship space for commercial articles is as scarce as ever.

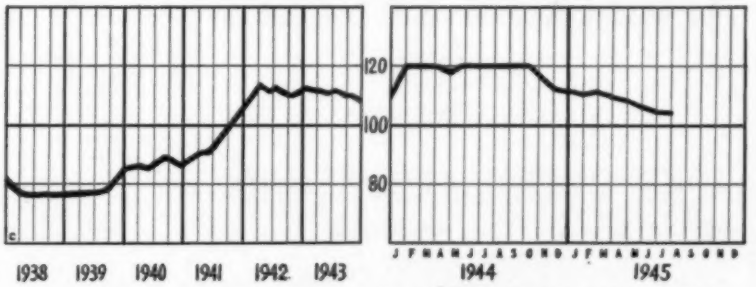
Vanilla Tight

While vanilla bean importers are at the moment actively engaged in shipping out goods that recently arrived from Madagascar, indications are that the supply position will remain tight for some time to come. It is understood that approximately 300 tons of beans had been purchased in Madagascar after July 1, but the export quota at Madagascar has been oversubscribed by at least 100 tons.

At the monent local importers are anxiously awaiting more detailed information from the primary center concerning these purchases. Last arrival of Bourdon beans amounted to approximately 196 cases. Prior to that a shipment of about 2,000 cases arrived but in spite of this, major importers state that there will be few beans left for stockpile purposes.

The entire production of old crop Mexican beans has been sold and it will be several months before the new crop will be ready. Because of unfavorable weather conditions during the growing period, however, it is generally feared the coming crop in Mexico will be considerably below normal.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index declined fractionally from 111.9 to 111.7. Menthol declined to $7.50 a pound; Balsam Peru was higher at $1.25.

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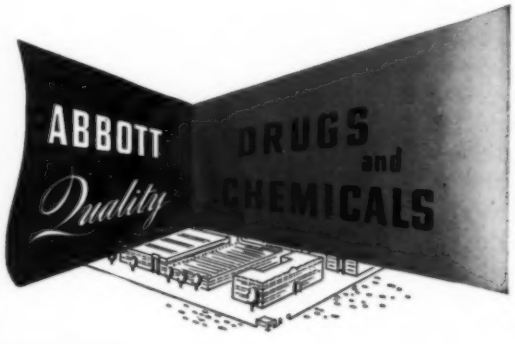

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Amino Acids

(*Continued from page 185*)

are highly susceptible to bacterial contamination during their production and are therefore liable to be pyrogenic; papain digests, although relatively free from this disadvantage, may contain partial breakdown protein products which are harmful, while the acid hydrolysates require fortification with tryptophane, since this amino acid is destroyed during hydrolysis.[18]

Casein, classed as a "complete" protein, is commonly used for making the hydrolysates. Meat also has its advocates. One pioneer in the field provides an oral product containing a balanced amino acid mixture derived from the enzymic digestion of meat, cereals, skim milk and yeast. The logic of such a combination appears clear from the observations of Martin and Thompson.[19] They point out that proteins differ in their amino acid content and that the combination of hydrolysates of various proteins offers great potentialities. Thus it is possible to select for hydrolysis two proteins which would supplement each other's deficiencies.

One of the early criticisms[9] of amino acid preparations, especially those based on enzymic digestion, was the lack of standardized or reproducible mixtures. Today, products of this type are subject to rigid chemical examination for uniformity and dependability. Some producers amplify their tests by the use of animal assay, with growth response as the criterion of an effective, therapeutically rounded product. Of interest in this connection is the development of microbiological methods for the rapid and accurate determination of amino acids.[20]

Bacteriological control is very necessary in the preparation of amino acids for oral administration, but is a prime requisite in products intended for parenteral administration. Tests for pyrogens are routine on solutions intended for use hypodermically. In addition most manufacturers of parenteral solutions submit their products to animal tests to determine the possible presence of allergens or substances with anaphylactic properties.

Unlike vitamins which require only minute quantities to produce the desired effects, comparatively large amounts of amino acids are necessary to maintain the requisite nutritional levels. For this reason the administration of the amino acids by mouth in the form of tablets or capsules is hardly feasible. Generally dispensed as powders or granules to be dissolved in water or other fluids, means must be provided to mash the unpleasant taste of the mixtures. Some products come flavored with chocolate or the like, while manufacturers of unflavored preparations suggest chilling or mixing with carbonated beverages or various juices to improve palatability.

Because of their ready utilization, orally administered amino acid preparations are useful dietary adjuncts in anovexia, debility, underweight, dyspepsia, faulty metabolism and similar conditions. Such products are

also valuable when whole protein is poorly utilized because of various gastrointestinal conditions such as diarrhea, various types of ulcers, colitis, allergies and the like. Under some circumstances, as in cases of surgical intervention, amino acids may be administered by tube. Often the solutions also include dextrose, water-soluble vitamins and salts.

When adequate food cannot be given by mouth, it must be administered hypodermically. Hence it is not surprising that the availability of parenterally-effective, safe amino acid solutions should be considered a most valuable addition to the medical armamentarium. This importance is clearly brought out in Elman's[12] discussion of parenteral fluids and foods in gastrointestinal disease. A pioneer in the use of amino acids by injection,[21] this authority explains that adequate parenteral food probably requires but five of the six nutritional elements. These are water, electrolyte, calories, protein and vitamins. The sixth element, fat, is omitted even though there is considerable evidence of its importance. The first three factors are generally supplied in the usual parenteral fluids such as solutions of Ringer's and saline plus glucose. Water-soluble vitamins in pure form can be injected either intravenously or subcutaneously.

This leaves the protein portion to be accounted for. With the possible exception of gelatin solutions, human plasma and amino acid mixtures are today the only two methods of introducing protein nourishment parenterally. While plasma has the great advantage of immediately supplying protein to the circulating blood, amino acids have certain advantages over this blood fraction. As a method of parenteral feeding, amino acids are much more physiologic in that they are in the form in which protein nourishment normally enters the body. In reality, the injection of such mixtures is a physiological short-cut in that it supplies protein nutrition without any activity on the part of the gastrointestinal tract. Another advantage of amino acid mixtures over plasma is the relative simplicity and economy with which they may be administered. As now available, these materials can be injected along with glucose and saline at a cost not much greater than that of the glucose-saline solution alone.

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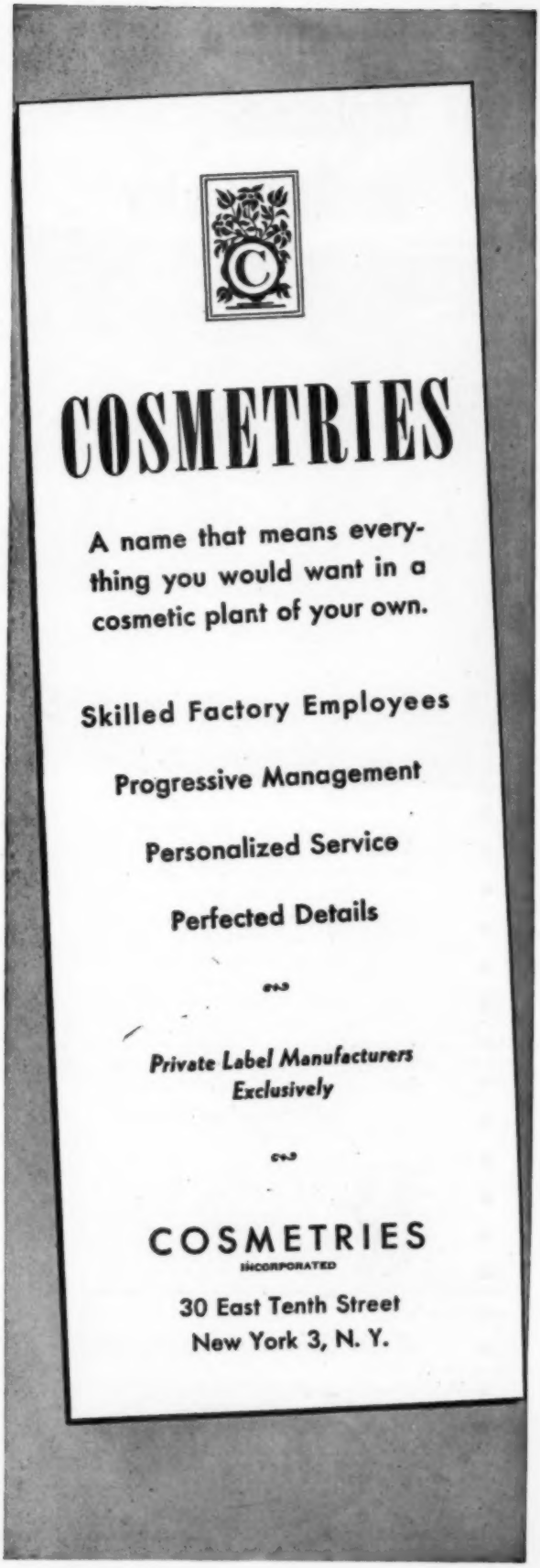
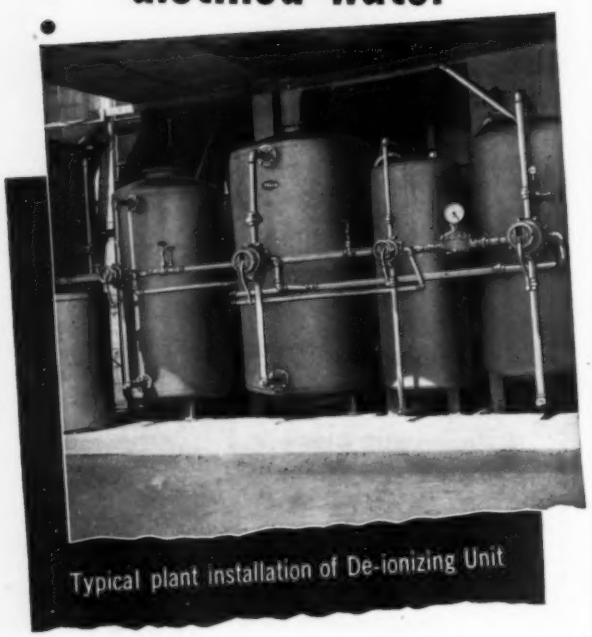


De-ionized water replaces distilled water



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Of interest in this connection is the use by Landesman and Weinstein[22] of an intravenous solution containing 2.5 or 5 per cent of amino acids plus sodium chloride, vitamins and dextrose in sufficient quantities to bring the daily caloric intake to 1,200 to 2,000 calories.

Properly prepared amino acid solutions may be injected intravenously, subcutaneously, intraperitoneally[23] and intrasternally.[24] The parenteral use of amino acids is now well beyond the experimental stage and there is an abundance of clinical evidence that these materials can be safely administered; that they can produce positive nitrogen balance and can correct hypoproteinemia.[24-28] In the few years since Elman and Weiner[21] first injected amino acids into humans, probably thousands of patients have received this form of parenteral feeding.

On occasion, especially in the early period, untoward reactions have been noted following injections of amino acid solutions. However, as remarked by Elman,[12] such a statement can also be made of blood transfusions and, in fact, of most intravenous injections. The important point is that enough has been done to warrant the statement that amino acid injection is an entirely safe procedure provided the usual precautions are taken and especially that the injections be given slowly. Too rapid injection is liable to cause facial flushing, a sensation of warmth and, in more severe instances, nausea, abdominal pain and vomiting. According to a recent note,[29] parenteral administration is contraindicated in the presence of severe hepatic insufficiency and in acidosis, unless this condition is corrected.

Parenteral feeding, including the use of amino acids, is indicated wherever the gastrointestinal tract cannot or should not be used. The first and most important use is in the feeding of patients unable to take food by mouth because of vomiting, obstruction or such. Parenteral feeding is also valuable in patients with severe diarrheas, intestinal fistulas or other conditions where food by mouth is poorly or unsatisfactorily utilized. Feeding by needle is also a requisite in those for whom food by mouth may actually be harmful like patients with peritonitis or inflammatory disease, those recently operated upon or in whom complete rest of the gastrointestinal tract is important. Such parenteral administration may also prove important where time is limited for correcting nutritional depletion, as might be the case in preparing patients for essential surgical intervention.[12]

Evidence is accumulating as to the value of parenteral amino acids in the preoperative and post-operative periods.[22, 24, 30, 31] As remarked by Davis,[32] the use of such preparations results in improved strength, appetite, wound healing and accelerated recovery. The convalescence period is shortened and complications are decreased. Parenteral amino acids also have valuable indications in the management of the severely wounded where nutritional support is an important factor.[33]

Given parenterally or orally, amino acids have proved valuable in the treatment of burns, where protein

losses are often excessive.[24, 34] Since loss of protein in the serous exudate following large burns is one of the contributing factors to shock, amino acids may be of use in combating this condition. There is growing evidence[35, 36, 37] of the value of these materials as supplements to plasma in the treatment of shock due to severe hemorrhage, burns and other conditions. The possibility of using amino acids as partial replacements for plasma in the post-war period when the blood derivative may be harder to get has also been considered.[38] Of interest in this connection is a recent report[35] of the clinical use of a red cell-amino acid mixture in isotonic glucose solution as a substitute for whole blood transfusions.

It should also be mentioned that the administration of amino acids has proved effective in the treatment of slow healing ulcers.[24] Because there are strong indications of a relationship between protein insufficiency and cirrhosis of the liver, Fagin and Zinn[39] used amino acids parenterally in a small series of cases. One patient showed great general improvement, three exhibited moderate improvement, while one patient remained unchanged. Evidently more work is needed in this phase of possible amino acid utility. There is also some experimental data pointing to the possibility of using amino acids in the treatment of nephritic patients,[7] but this, too, requires further exploration.

The first mass trial of the amino acids in nutritional rehabilitation is now going on in Nazi-ravaged Europe, especially in the Netherlands, where the situation is said to be especially grave.[18, 40, 41] Used as a "famine food," amino acid preparations are being given to combat nutritional edema, also known under such indicative names as war edema, hunger swelling, famine edema, hunger edema and prison edema. Although it is not yet possible to predict the value of the amino acid preparations in cases of extreme starvation,[18] it is known that such materials are of decided worth in cases of protein deficiency.[42] In this connection it might be well to remember that protein malnutrition probably more prevalent in our own country than is generally realized.[43, 44] One wonders what effect wartime food restrictions may have had on the over-all nutritional picture.

Since the demands for protein are increased during pregnancy and lactation, it would seem that amino acids would be useful in these circumstances. Vomiting is, of course, common in pregnancy and may be an important element in protein deficiencies. Impaired digestion, also frequent is likewise a factor. Some evidence has also been accumulated indicating that a high protein intake may exert a protective effect against the toxemias of pregnancy.[7]

The field of pediatries is another phase of medical care with major possibilities for the amino acids. That infants and children can absorb and utilize amino acid mixtures has been demonstrated by a number of workers.[45, 46, 47] As pointed out by Hartmann and his associates,[48] "the use of amino acid solution either

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orally or parenterally makes it possible to prevent or reduce loss of body protein by children who are unable to derive adequate nutrition from natural foods taken by mouth." Such administration has also proved a major measure in children with kidney or gastro-intestinal dis-orders.[48, 49, 50]

Another very promising indication for amino acids is in the feeding of infants and children allergic to proteins, especially those of milk and milk products. Hills[51] has found that it is possible to feed allergic infants satisfactorily for quite considerable periods on a synthetic diet based essentially on amino acids. Such a food was found to have several advantages over other milk-free foods.

Because anemia due to limited hemoglobin formation is frequently a symptom of poor protein nutrition,[52] it is probable that amino acid therapy may prove useful in treating such conditions. Definite proof of their effectiveness has been obtained in the treatment of muscular dystrophies.[24]

The comparatively new field of geriatrics is another phase of medicine that offers promise for the advantages of the amino acids. The lowered food intake, peculiar food habits and the soft diet of the aged, especially those with poor teeth or bad dentures, are quite conducive to protein deficiencies. It is quite possible that such deficiencies may be significant elements in the causation of various subclinical conditions like mild anemia, undue fatigue or lassitude, and lessened vigor.[53] Correcting such mild deficiencies may do much to provide healthier and happier old age.

Several individual amino acids have already found rather important uses in modern therapeutics and others show very interesting potentialities.[54, 55, 56] This, however, is a story in itself. Some chapters in this story have already appeared in the pages of this publication.[57]

Much has yet to be learned concerning the amino acids, but in a field receiving so much attention from so many quarters striking developments can always be expected. Continued study of these newer agents—whether provided as crystalline products or protein hydrolysates—should provide the physician with useful weapons for the treatment of many ailments.

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Essential Oils from Middle America

(*Continued from page 187*)

97 pounds of lemon grass oil per acre and indicated that chopped grass yields about 40 per cent more oil than unchopped grass. The oil now in harvest has an unusually high citral content and otherwise is far above market specifications. In general the yields of citronella oil average about twice those of lemon grass or from 195 to 210 pounds of oil per acre yearly from three or four cuttings of the grass. No questions linger as to the quality of Middle American grass oils. Already the essential oils grown in the American tropics have won premium market gradings on the U. S. markets and grass oil products are continually being made better.

The distillation of oil grass grown in the American tropics is an even more impressive proof of that promising virtue of Inter-American ingenuity. During the recent war years, neither the United Fruit Company nor any other producers of essential oils in the American tropics has been able to buy the necessary stills or the materials with which to build the grass distilleries. In every instance they have been forced to improvise by the use of just about any available junk or scrap metals or lumber or any other building materials which can be found close at hand.

Before Pearl Harbor there were at least three privately operated grass oil stills in Guatemala. At present one of this hemisphere's biggest grass oil distilleries, constructed and put into operation near La Lima, Honduras, by the Tela Railroad Company, a subsidiary of United Fruit, is strictly a flotsam factory. The first attempts at distilling the grass employed an old-style copper-vat still with a capacity of only a few hundred

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pounds of the dried chopped grass. Next the tropical neighbors began building wooden stills of 200 cubic feet capacity each and pivoted them on home-forged iron frames, then salvaged old boilers and discarded iron pipe, therewith establishing a steam distributing system. The rather remarkable fact is now proved that the flotsam stills are working—perhaps more efficiently than the Java stills which were so readily stolen by the Japs.

The U. S. Sugar Corporation launched its well studied and aggressive program for lemon grass planting in the area of Clewiston, Florida, during July, 1942. Apparently lower Florida's climate is not consistently warm enough to permit the profitable growing of the propagated strains of citronella grasses. It can and does produce lemon grass.

While essential oils represented a comparatively small percentage of the value of the total United States prewar imports—around $10,000,000 a year—they are key products which are more or less essential to many great industries which represent a normal turnover of $750,000,000 a year. In all there are more than a hundred essential oils of market value. Of these the more important are petit-grain, derived from the leaf of bitter orange and normally produced in Paraguay and southern Europe; citronella; lemon grass or *limoncillo;* geranium, ordinarily from Algiers; lavender from southern France; vetivert, the perfume essence; neroli from the flower of the bitter orange produced in Italy; jasmine, cinnamon cassie and the tuberose, all three from southern France; rose oil from Bulgaria; ylang-ylang from Madagascar; and bergamot, produced from oranges in southern Italy.

All these requirements of the cosmetic and perfume industries can be produced in Middle American terrains as current experiments are beginning to prove. The Jewish refugee colony at Sosua on the north shore of the Dominican Republic plans to specialize in essential oils and has made extensive plantings of citronella, lemon grass and ylang-ylang. The U. S. Agricultural Experiment Station in Puerto Rico is now experimenting in the production of citronella grass for the production of menthol. The station is also growing lemon grass, jasmine, gardenia, cassie and mimosa, and is further studying the possibility of obtaining an essential oil from the fragrant blossoms of the coffee tree. Pine and eucalyptus oils can unquestionably be produced in Middle America, if price and tariff standards permit. The same may hold for various medicinal and spice plants including pyrethrum, coriander, white mustard, poppy seed, goat's rue, marjoram, sage ratany root and soapbark.

Also the pimenta or allspice and the laurel or the bay tree of the West Indies; the balsams of Peru and Central America and the tolu of El Salvador and Colombia; the copaiba which grows on the shores of the Orinoco; the linaloe of southern Mexico; and the palo rosa ("Aniba Rosae Odora") of the Guianas and Brazil.

We are, therefore, having more products trade-marked and advertised as a result of the dedication to private enterprise of the pharmaceutical industry. I predict that emphasis on trade-marked specialties will increase steadily in importance.

Pharmaceutical advertising of the future will continue to be more artistic—will have more color—will be better printed, on better paper, than ever in the past. It will cost more and it will be worth every penny of the additional cost.

I also predict that because of advertisers' requirements, medical journals will print better magazines from the mechanical standpoint. They will use full color in their own clinical illustrations and will provide facilities for the use of full-color illustrations in their advertising pages. I believe this trend will result in the finest direct-mail and journal advertising the industry has ever seen—all of which will reflect to the advantage of all of us.

These, in general, are our predictions as to the quality and quantity of advertising thatwill be used by pharmaceutical manufacturers. There will, of course, be other changes, but what these will be, no one can say for sure. There will, for example, be some standardization of sizes among medical journals and there will be increased use of direct-mail pieces of a more scientific nature than in the past.

The pharmaceutical industry is a highly specialized one—its methods and its tools are not applicable in many other kinds of business, nor are the tools and techniques of other businesses applicable in pharmaceutical selling. Pharmaceutical manufacturers already understand their market, since they have grown up with it and, in most cases, have had to learn their merchandising methods "the hard way"—they know these methods are distinct and individual. They know, too, that doctors are men whose ideals and principles are on a very high plane and that the factors influencing their choice of drugs used in their practice have little if any, similarity to commodity purchases. For this reason, pharmaceutical advertising must, if successful, continue to follow its time-proven trends combining dignity, truth and ethics as its "selling features."

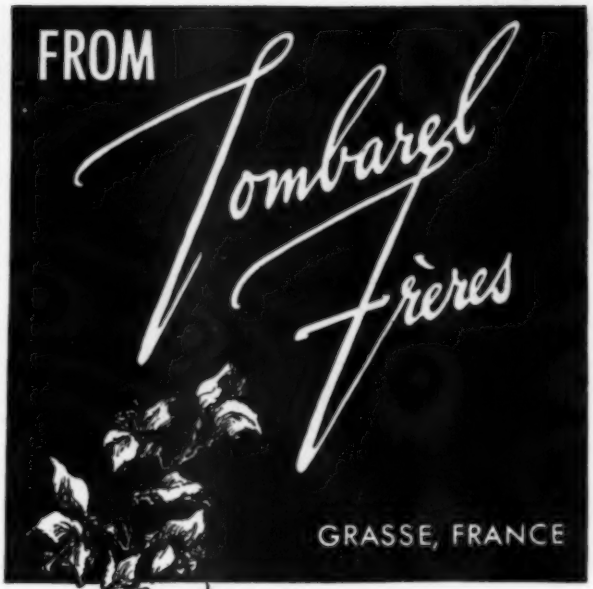
Review of New Law Suits

(Continued from page 183)

medicines, pharmaceutical preparations and toilet preparations. The mark was used on other products comprising pure glycerin and rubbing alcohol which is sold *only* in drug departments.

A company which manufactured an anti-freeze solution for automobile radiators applied for registration of the same trade-mark "Goldex." In other words, the manufacturer of the anti-freeze solution which comprised a mixture of alcohol and glycerin applied to register and use the same trade-mark being used by Goldsmith on alcohol and glycerin used for a skin rubbing compound.

It is interesting to observe that the higher court al-



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lowed registration of the new mark for use on anti-freeze solutions, because this new use of the mark would not confuse the public. This court said:

"While it is well-known that glycerin and alcohol may be used in anti-freeze preparations for automobiles, the pure glycerin and rubbing alcohol of appellant's registration are included with a great many other medicinal and pharmaceutical preparations, which in our opinion would restrict the scope of the registration to those substances as pharmaceuticals. In our opinion appellant's (manufacturer's) registration cannot cover glycerin or alcohol in every guise."

Therefore, it is quite apparent that two manufacturers may register and use exactly the same trademark for use on merchandise in different classifications.

Authority of President

Frequently the legal question is asked: Is a corporation liable for contracts and agreements made by its President? The answer is that if the by-laws of the corporation do not authorize the President to obligate the corporation such contract is void.

For illustration, in Betz v. Tacoma Drug Company, 131 Pac. (2d) 183, the testimony proved that the President of a drug corporation entered into an option agreement, signed, "Tacoma Drug Company, by C. F. Osmers, President."

The higher court held the corporation not liable on this contract because the corporation's sby-law gave neither the president nor general manager of the company authority to make valid contracts of this nature.

On the other hand, this court explained that a corporation's President may sell the corporate property and make other valid contract where such power is conferred by the directors or other governing body, or where the transaction is in the "ordinary" course of business of the corporation. This court explained further that when the testimony proves that the president has had "entire" management of the corporate business, this authority automatically clothes him with authority to act for the corporation in all other respects.

Sales Manager Cannot Cancel Contract

No corporation employe, including a sales manager, may make a valid contract, nor cancel a previously made contract, without proper and legal authority of either the president of the corporation, or its directors.

For instance, in Ester Company, Inc., v. Williams, 14 So. (2d) 319, it was disclosed that a man named Williams made a contract with a corporation agreeing to purchase specified merchandise at stipulated prices. The contract was signed by the president of a corporation. Later Williams requested the sales manager of the company to cancel the contract. The sales manager agreed to release him from obligations of the contract.

However, in subsequent litigation the higher court held Williams fully liable on the contract.

Liable for Contracts Made by Manager

Considerable discussion has arisen from time to time over: When is a drug manufacturer liable for contracts made by a sales manager?

Generally speaking, a corporation is liable for all contracts made by the manager of a department, or branch, so long as such contracts are within the scope of his authority. Moreover, a contract is valid and binding although the manager was not *specially* authorized to enter into the agreement, providing it is within his "general" authority and relates to the legal conduction and protection of the business.

For instance, in the leading case of Zachry, 294 Pac. 114, it was disclosed that a manager employed by a corporation entered into a contract by the terms of which he employed an attorney to represent the corporation in legal matters pertaining to his department of the business.

The lower court held the corporation liable for services rendered by the attorney, and the higher court upheld this decision, stating the following important law:

"The president and general manager or general manager of a corporation has the implied authority to employ counsel to represent it in litigation, instituted for or against the corporation or in an advisory capacity, without special action of the board of directors authorizing it. . . . . "

Illegal Advertising

Modern higher courts consistently hold that any and all untruthful statements either on labels, or in advertisements of a drug product are illegal.

For illustration, in Federal Trade Commission, 139 Fed. (2d) 1019, it was shown that the manufacturer of perfumes used the trade-name "Paris." The higher court held that use of this word in this manner was illegal because it indicated to the ordinary purchaser that the product was of foreign origin.

The court explained that the manufacturer could avoid responsibility by plainly printing on his label the fact that the product was manufactured in the United States.

INSECT REPELLENT INGREDIENT: We have read quite a lot about dimethyl phthalate as one of the ingredients of an insect repellent. Do you have any idea where we can get any clinical data on the percentage to use to make the product efficacious? St. Paul.

Dimethyl phthalate is a standard ingredient of an insect repellent specified by the Government for Army use, and on that basis I would assume that it is quite safe, but I have not had an opportunity to check extensively into its dermatological properties. A formula containing this material has been published several times in our magazine, the last one appearing in the August 1944 issue of Drug & Cosmetic Industry, page 240; the proportions used being five per cent. However, larger quantities of this ingredient have been recommended in other insect repellent compositions.

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READERS'

STEARATE CREAMS: I am interested in a formula for making vanishing cream without the use of stearic acid. Can you oblige me with such a formula? Kimball.

Stearic acid is one of the most important ingredients of vanishing creams and practically all such products are made with a stearate in some form or other. However, the direct use of stearic acid may be avoided by the use of a method such as the following:

Glyceryl monostearate	**13.0**
Beeswax	**2.0**
Sesame oil	**3.0**
Lecithin	**2.0**
Glycerine	**10.0**
Water	**70.0**

A simpler formula using another stearate is as follows:

Diglycol stearate	**11.0**
Lanolin	**3.0**
Peanut oil	**3.0**
Glycerine	**3.0**
Water	**80.0**

GREASELESS OINTMENT BASE: We are in the market for a greaseless base for an ointment. We will be happy if you can furnish us with one. Chicago.

Inasmuch as you do not mention what types of medicament you intend using, I cannot be too specific because the medicament may be incompatible with the base recommended. Perhaps you will find the answer to your problem in an excellent survey on washable ointment bases published in the "Journal of the American Pharmaceutical Association, Practical Pharmacy Edition," December 1941, page 467, and very adequately abstracted in DRUG AND COSMETIC INDUSTRY for March 1942, page 317.

Cox and Goodrich suggested the following base as satisfactory for ointments of boric acid, tannic acid, iodine, phenol, sulfur, benzoic acid, calamine, ichthammol, potassium iodide, and 10 per cent balsam of peru. This ointment has been found to be easily prepared:

Glyceryl monostearate	**10 Gm.**
Glycerine	**25 Gm.**
Bentonite	**2 Gm.**
Distilled water, to make	**100 Gm.**

Sprinkle the bentonite on 50 cc. distilled water, and after it is thoroughly wetted, stir (with mechanical mixer or egg beater) until a uniform magma results. Heat the glyceryl monostearate, the glycerine and the remainder of the water on a water bath to 85° C. Add the bentonite magma, previously heated to the same temperature, and stir until cold.

A non-greasy base for carrying precipitated sulfur and salicylic acid has recently been given by J. G. Downing and his associates as follows:

Sodium lauryl sulfate	**0.8 parts**
Cetyl alcohol	**15.0 "**
Glycerine	**5.0 "**
White petrolatum	**14.0 "**
Water	**35.0 "**

QUESTIONS

METHENAMIN IN DEODORANTS: Will you kindly advise us whether a cream deodorant containing 3% methenamin in a glyceryl monostearate base is safe to use, and whether it is harmful to fabrics? Decatur.

Methenamin is quite frequently used as an ingredient of deodorant creams. However, this compound, which slowly liberates ammonia and formaldehyde, is sometimes responsible for an irritant dermatitis and must be used in small proportions. I have no information as to its action on fabrics. Illustrative of its use in glyceryl monostearate creams is the following deodorant formula:

Glyceryl monostearate	**15.0**
Spermaceti	**5.0**
Methenamin	**3.0**
Glycerine	**8.0**
Water	**69.0**

WAVE SET PREPARATIONS: We have been advised that you could supply us with formulae for making up wave set. We would very much appreciate hearing from you and receiving any information that you may send to us. Thank you for this courtesy. Cambridge.

Preparations for setting the hair are generally made with vegetable mucilage, water, preservatives, alcohol, glycerine and perfume. Only best grades of gum should be employed to make the mucilage. Quince seed and karaya are frequently recommended but other materials such as gum tragacanth, methyl cellulose, pectin, gelatin, acacia and Irish moss and the like, have been recommended. Methyl parahydroxybenzoate is considered a suitable preservative for such mucilages. A wave set based on gum karaya may be prepared from:

Gum karaya	**1.75 parts**
Water	**90.75 "**
Methyl parahydroxybenzoate	**0.25 "**
Perfume	**0.25 "**
Alcohol	**7.00 "**

Mix the gum and half the alcohol and stir the mixture into the water. Strain if necessary. Add the perfume and preservative dissolved in the rest of the alcohol.

A product based on quince seed consists of:

Quince seed	**2.25 parts**
Propyl parahydroxybenzoate	**0.10 "**
Alcohol	**0.30 "**
Water	**97.10 "**
Perfume	**0.25 "**

In water which has been heated to about 80° C., add the quince seed, allow to soak for 6 hours, strain the mucilage and add the preservative last with the alcohol and perfume. A clearer mucilage is obtained when the seeds are extracted with cold water.

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READERS'

STYPTIC PENCIL: We have been requested by a customer for the usual composition of Styptic Sticks. Do these contain aluminum sulfate? We will appreciate any information you can give us. Phillipsburg.

Styptic pencils often contain aluminum sulfate as an essential ingredient, as is indicated in the following formula for such a product:

Ammonia chloride	**7.0**
Aluminum sulfate	**27.0**
Ferric sulfate	**40.0**
Copper sulfate	**26.0**

Mix the ingredients together; heat in a porcelain lined vessel until they fuse and while the mass is molten, pour into molds.

SULFA VEHICLE: Although I have read Mr. Baker's very complete article on sulfonamide bases and I have seen other formulas since then, I am not quite sure as to what would be the most suitable sulfa vehicle for dermatological use. Does there appear to be any particular combination finding favor with the medical profession? Any information would be greatly appreciated. New York City.

Although many dermatologists have their own pet formulas for sulfas, there is considerable evidence that most workers accept the following sulfa composition as the most suitable. Developed by Pillsbury and his associates several years ago, it consists of:

Sulfathiazole	**5.0**
Sodium lauryl sulfate	**1.0**
Stearyl alcohol	**10.0**
Cetyl alcohol	**3.0**
Spermaceti	**10.0**
Glycerine	**10.0**
Water	**61.0**

TABLET MANUFACTURE: We would greatly appreciate any information you can give us regarding the general manufacture of tablets. Cincinnati.

Tablet manufacture is quite an extensive subject and one that could hardly be answered briefly. Basic information on the subject will be found in standard pharmacal manufacturing texts such as "Remington's Practice of Pharmacy" by Wood and LaWall: "Pharmaceutical Dispensing" by Husa, and "Art of Compounding" by Scoville and Powers. The last two of these books may be purchased from our book department and the first will be found at any standard scientific reference library.

Occasionally items on tablet manufacture and tableting problems will be found in current issues of DRUG AND COSMETIC INDUSTRY; the last of which appeared in the October 1943 issue, page 423. I would suggest that you get in touch with manufacturers of tableting equipment. Their catalogs and publications often contain very much valuable information.

QUESTIONS

BABY PRODUCTS: We have been given your address with the suggestion that we might obtain from you some information on a special baby line, consisting of oil, soap and powder. Eventually other products to be added to get a complete baby bath kit. New York.

A quite complete article on the preparation of baby products appeared in the January 1945 issue of DRUG AND COSMETIC INDUSTRY, page 38. In view of the possibility that you may not have this article on hand, I am including a formula for a baby oil and baby powder. The formula for the baby powder is as follows:

Boric acid	**10.0**
Zinc oxide	**10.0**
Kaolin	**50.0**
Magnesium stearate	**5.0**
Purified talc	**25.0**

A quite completely satisfactory baby oil may be made from highly purified light mineral oil. However, most producers prefer a more rounded formula so I would suggest the following:

Lanolin	**3.0**
Ethyl stearate	**7.0**
Mineral oil	**90.0**

Production of soap is out of our line, but it would seem to me that a good grade of castile soap meeting at least the specifications for hard soap U.S.P. would be quite satisfactory.

DENTURE CLEANERS: Some time ago you published an article on dental products. Unfortunately, I have not been able to locate my copy and I am appealing to you for some information which I believe was included. Can you give me several formulas for denture cleaners? Detroit.

Denture cleaners to be used with special brushes contain substances which act either chemically or physically to assist in the mechanical benefits derived from the brushing. One simple preparation listed in the official "Accepted Dental Remedies" consists of:

Trisodium phosphate	**120.0 Gm.**
Oil of cinnamon	**0.3 Gm.**
Liquor amaranth	**2.0 Gm.**

This is employed by dissolving a scant quarter teaspoonful in a glass of water and is applied with a brush.

Denture brushing powders are often similar to ordinary tooth powders in composition. Such a powder, said to have been found satisfactory in every way and to be applied on a damp brush, has the following composition:

Precipitated chalk	**4 oz.**
Heavy magnesium carbonate	**1 oz.**
Light magnesium carbonate	**½ oz.**
Powdered soap	**2 dr.**

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